EPA Jacket 100-921

Vol.3


100-0ER

Acibenzolar-*S*-methyl Technical

For Formulation into End-Use Crop Protection Products

Active Ingredient: Acibenzolar-S-methyl: Benzo(1,2,3)thiadiazole-7-carbothioic acid-S-methyl ester*	99.0%
Other Ingredients:	1.0%
Total	100.0%

*CAS No. 135158-54-2

EPA Reg. No. 100-921

EPA Est. _____

Product of Switzerland

Product ID 14364

SCP 921A-L1C 0805

NOT REVIEWED
In Accordance with PR Notice 82-2
Based on Draft Labeling Dated
8-12-2005

_____ **Kilograms**

Net Weight

syngenta

SCP 130 921A L1C

FIRST AID	
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lens, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN If ingested induce emesis or lavage stomach. Treat symptomatically.	
HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call **1-800-888-8372**	

PRECAUTIONARY STATEMENTS

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

Environmental Hazards

This product is toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and Buyer and User assume the risk of any such use. SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

IT IS SYNGENTA'S AND SELLER'S INTENTION THAT in no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitations of Warranty and of Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

KEEP OUT OF REACH OF CHILDREN

CAUTION

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product is intended for the formulation of crop protection products. This product may be used to formulate products for specific use(s) not listed on the MP label if the formulator, user group, or grower has complied with the U.S. EPA data submission requirements regarding the support of such use(s).

This product is intended for formulation into end-use products for protection against certain diseases of cole crops, leafy vegetables, fruiting vegetables, and tobacco.

STORAGE AND DISPOSAL

Pesticide Storage and Disposal

Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during clean up procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Syngenta Crop Protection, Inc.
Greensboro, North Carolina 27409
www.syngenta-us.com

SCP 921A-L1C 0805

5781980

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

AUG 12 2005

Patrick McCain
Regulatory Product Manager
Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Subject: Acibenzolar-S-methyl Technical
EPA Reg. No. 100-921
Your amendment dated July 19, 2005

Dear Mr. McCain:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made:

1. In the section CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY, the label must make it clear that the disclaimer statements in paragraph 4 starting "In no event shall SYNGENTA or Seller be liable for any incidental..." are the registrant's and do not come from EPA. This can be done by using statements such as "To the fullest extent permitted by law, the manufacturer shall not be liable...." or "It is the manufacturer's intention that...."

One copy of the label stamped "Accepted with comments" is enclosed for your records. This label supercedes all labels previously accepted for this product. Please submit one copy of the final printed label that incorporates the required changes before the product is released for shipment.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

Tony Kish
Acting Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Enclosure

Master

Acibenzolar-S-methyl Technical

For Formulation into End-Use Crop Protection Products

Active Ingredient:	
Acibenzolar-S-methyl: Benzo(1,2,3)thiadiazole-7-carbothioic acid-S-methyl ester*	99.0%
Other Ingredients:	1.0%
Total	100.0%

*CAS No. 135158-54-2

EPA Reg. No. 100-921

EPA Est. _____

Product of Switzerland

SCP 921A-L1C 0705

_____ Kilograms
Net Weight

ACCEPTED
with COMMENTS
In EPA Letter Dated:
AUG 12 2005
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 100-921

FIRST AID	
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lens, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN If ingested induce emesis or lavage stomach. Treat symptomatically.	
HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call **1-800-888-8372**	

PRECAUTIONARY STATEMENTS

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

Environmental Hazards

This product is toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and Buyer and User assume the risk of any such use. SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitations of Warranty and of Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

KEEP OUT OF REACH OF CHILDREN

CAUTION

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product is intended for the formulation of crop protection products. This product may be used to formulate products for specific use(s) not listed on the MP label if the formulator, user group, or grower has complied with the U.S. EPA data submission requirements regarding the support of such use(s).

This product is intended for formulation into end-use products for protection against certain diseases of cole crops, leafy vegetables, fruiting vegetables, and tobacco.

STORAGE AND DISPOSAL

Pesticide Storage and Disposal

Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during clean up procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Syngenta Crop Protection, Inc.
Greensboro, North Carolina 27409
www.syngenta-us.com

SCP 921A-L1C 0705

ACI 921A-L1C 0705-hilite - bb - 07-15-05

000100-00921.20050719.Acibenzolar-S-methyl Update Purity.doc
000100-00921.20050719.Acibenzolar-S-methyl Update Purity.pdf

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

July 22, 2005

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

PATRICK MCCAIN
SYNGENTA CROP PROTECTION, INC.
ATTN: REGULATORY AFFAIRS
PO Box 18300
GREENSBORO, NC 27419-8300

PRODUCT NAME: ACIBENZOLAR-S-METHYL TECHNICAL
COMPANY NAME: SYNGENTA CROP PROTECTION, INC.
EPA FILE SYMBOL: 100-921
EPA RECEIPT DATE: 07/21/05

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application appears to qualify for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability for fast track status.

If you have any questions, please contact Registration Division, Risk Management Team 22, at (703) 308-9443.

Sincerely,

J White

Front End Processing Staff
Information Services Branch
Information Technology & Resources Management Division

Fee for Service

This package includes the following

- ○ New Registration
- ◉ Amendment

☐ Studies? ☐ Fee Waiver?

☐ volpay % Reduction: ___

for Division

- ○ AD
- ○ BPPD
- ◉ RD

Risk Mgr. 22

Receipt No. S- 781980

EPA File Symbol/Reg. No. 100-921

Pin-Punch Date: 7/21/05

☒ This item is NOT subject to FFS action.

Action Code:

Requested: ____

Granted: ____

Amount Due: $ _____

Parent/Child Decisions:

NON – FEE

Reviewer: J. Miller Date: 1-22-05

Remarks:

IS goes to PChem - please provide previous CSF to ck new 99.0% label claim - LK

Please read instructions on reverse before completing form.

United States Environmental Protection Agency Washington, DC 20460	[ ] Registration [x] Amendment [ ] Other	OPP Identifier Number XXXXX

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
Acibenzolar-S-methyl Technical	Cynthia Giles-Parker	[X] None [ ] Restricted
4. Company/Product (Name)	PM#	
100-921	22	

5. Name and Address of Applicant *(Include ZIP Code)*
Syngenta Crop Protection, Inc.
P. O. Box 18300
Greensboro, NC 27419

[ ] *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

[x] Amendment - Explain below.

[ ] Resubmission in response to Agency letter dated _____

[ ] Notification - Explain below.

[ ] Final printed labels in response to Agency letter dated _____

[ ] "Me Too" Application.

[ ] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For Section I and Section II.).

Syngenta hereby submits an administrative amendment to revise the product labeling required by the EPA approval letter for the subject product dated August 11, 2000 and as a result of EPA approval (letter dated September 16, 2003) of a new nominal purity of 99% for the active ingredient trinexapac-ethyl (EPA Reg No.100-921).

Fees for Service

Syngenta believes that consideration of this amendment qualifies for expedited processing under section 3(c)(3)(B)(i)(I) of FIFRA (Fast-Track) and therefore does not require a fee under the Pesticide Registration Improvement Act (PRIA).

Section – III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging		Water Soluble Packaging		2. Type of Container
[ ] Yes* [ ] No	[ ] Yes [ ] No		[ ] Yes [ ] No		[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
**Certification must be submitted*	If "Yes" Unit Packaging wgt.	No. per Container	If "Yes" Unit Packaging wgt.	No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[ ] Label [ ] Container		[ ] On Label [ ] On Labeling accompanying product

6. Manner in Which Label is Affixed to Product [ ] Lithograph [ ] Paper glued [ ] Stenciled [ ] Other _____

Section – IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Patrick McCain	Regulatory Product Manager	336.632.7317

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title
Patrick McCain	Regulatory Product Manager
4. Typed Name	5. Date
Patrick McCain	July 19, 2005

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

Syngenta Crop Protection, Inc. Tel 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

syngenta

FEDERAL EXPRESS

July 19, 2005

Ms. Cynthia Giles-Parker
Chief - Fungicide Branch
Document Processing Desk (AMEND) (REGFEE)
Office of Pesticide Programs (H7504C)
U.S. Environmental Protection Agency
1801 South Bell Street
Crystal Mall 2 – Room 266A
Arlington, VA 22202

Attention: Ms. Cynthia Giles-Parker
Chief – Fungicide Branch

Subject: Acibenzolar Technical (EPA Reg. No. 100-921)
Amendment – Update Purity, Include Revisions per EPA Approval Letter August 11, 2000

Dear Ms. Giles-Parker:

Syngenta hereby submits an administrative amendment to revise the product labeling required by the EPA approval letter for the subject product dated August 11, 2000 and as a result of EPA approval (letter dated September 16, 2003) of a new nominal purity of 99% for the active ingredient trinexapac-ethyl (EPA Reg No.100-921).

Fees for Service

Syngenta believes that consideration of this amendment qualifies for expedited processing under section 3(c)(3)(B)(i)(I) of FIFRA (Fast-Track) and therefore does not require a fee under the Pesticide Registration Improvement Act (PRIA).

Enclosed in support of this submission are the following documents:

- Five (5) copies of the revised labeling one which is highlighted
- Completed EPA Application for Pesticide Registration Form 8570-1
- CD with pdf of label
- Signed Certification with Respect to Label Integrity Form
- EPA approval letter for new nominal purity dated September 16, 2003.

If you have any questions or comments, please contact me at 336.632.7317 Regulatory Specialist, Trina Brodie at 336.632.2062.

Respectfully submitted,

Patrick McCain
Regulatory Product Manager

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

SEP 16 2003

Larry Zang
Senior Regulatory Product Manager
Sygenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Subject: Acibenzolar-S-methyl Technical
EPA Reg. No. 100-921
Amendment dated February 27, 2003

Dear Mr. Zang:

The Agency has completed the technical review of the mutagenicity study (MRID 454341-01) that you submitted in support of the subject revised basic Confidential Statement of Formula (CSF), and has concluded that the study adequately supports the revised CSF and removal of the impurity CGA-362020 from the CSF as you proposed. A copy of the Agency's Memorandum dated August 29, 2003 is enclosed for your records.

The revised basic Confidential Statement of Formula (CSF) dated 2/20/03 referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable. A copy of the Product Chemistry Review dated 6/20/03 is enclosed for your information.

Please note that this CSF supercedes all previous CSFs for this product and will be added to the regulatory file.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

Cynthia Giles-Parker
Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Enclosure

The Electronic Copy of the Label Submitted with this Application has been Removed by the Front End Processing Unit for Entry in the Electronic Label Library (ELL).

Please contact either Tom Harris (RD) or Bob Schultz (IRSD/ISB) for Assistance.

Certification with Respect to Label Integrity

version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
100-921	07-19-05	000100-00921.20050719.Acibenzolar-S-methyl Update Purity.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

Patrick McCain
Signature

July 19, 2005
Date

Patrick McCain
Name (typed)

Regulatory Product Manager
Title

Master

Acibenzolar-*S*-methyl Technical

For Formulation into End-Use Crop Protection Products

Active Ingredient:	
Acibenzolar-S-methyl: Benzo(1,2,3)thiadiazole-7-carbothioic acid-S-methyl ester*	99.0%
Other Ingredients:	1.0%
Total	100.0%

*CAS No. 135158-54-2

EPA Reg. No. 100-921

EPA Est. _____

Product of Switzerland

SCP 921A-L1C 0705

_____ Kilograms
Net Weight

FIRST AID	
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lens, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN If ingested induce emesis or lavage stomach. Treat symptomatically.	
HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call **1-800-888-8372**	

PRECAUTIONARY STATEMENTS

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

Environmental Hazards

This product is toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and Buyer and User assume the risk of any such use. SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitations of Warranty and of Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

KEEP OUT OF REACH OF CHILDREN

CAUTION

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product is intended for the formulation of crop protection products. This product may be used to formulate products for specific use(s) not listed on the MP label if the formulator, user group, or grower has complied with the U.S. EPA data submission requirements regarding the support of such use(s).

This product is intended for formulation into end-use products for protection against certain diseases of cole crops, leafy vegetables, fruiting vegetables, and tobacco.

STORAGE AND DISPOSAL

Pesticide Storage and Disposal

Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during clean up procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Syngenta Crop Protection, Inc.
Greensboro, North Carolina 27409
www.syngenta-us.com

SCP 921A-L1C 0705

ACI 921A-L1C 0705-hilite - bb - 07-15-05

000100-00921.20050719.Acibenzolar-S-methyl Update Purity.doc
000100-00921.20050719.Acibenzolar-S-methyl Update Purity.pdf

Syngenta Crop Protection, Inc. Tel. 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

syngenta

July 24, 2001

Document Processing Desk
Registration Division (H7504C)
Office of Pesticide Programs
U. S. Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall 2, Room 266A
Arlington, VA 22202

Attn: Ms. Cynthia Giles-Parker, Team 22

Subject: Studies related to the conditional registration of Acibenzolar-s-methyl (EPA Reg. No. 100-921)

Dear Ms. Giles-Parker:

This letter is to confirm that Syngenta Crop Protection has complied with the conditions of registration for acibenzolar-s- methyl as outlined in the EPA conditional registration of the technical product on August 11, 2000.

On June 15, 2001 Syngenta made a data submission to EPA that contained upgrades to soil photolysis, aerobic soil metabolism, aerobic aquatic metabolism studies and, one of two batch equilibrium studies. These studies were to be submitted within one year of receipt of the conditional registration of acibenzolar-s-methyl.

Also included in this submission was a study related to conditions of registration that were to be satisfied within two years of receipt of the conditional registration for acibenzolar-s-methyl. The study satisfies the requirement for a "mutagenicity study (Ames Assay) with technical grade acibenzolar-s- methyl".

Please contact me at (336) 632-2146 if you have any questions regarding this submission.

Yours truly,

Larry Zang
Regulatory Product Manager

CC: Ms. Maria Rodriguez

Syngenta Crop Protection, Inc. Tel. 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

syngenta

FEDERAL EXPRESS

June 15, 2001

Document Processing Desk
Registration Division (H7504C)
Office of Pesticide Programs
U. S. Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall 2, Room 266A
Arlington, VA 22202

Attention: Ms. Cynthia Giles-Parker

Subject: Data Submission related to Actigard 50WG (100-922) and Acibenzolar (100-921).

Dear Sir or Madam:

Syngenta Crop Protection is making a data submission related to Actigard 50WG (100-922) and acibenzolar (100-921). With the exception of the study related to product chemistry, these studies were requirements of registration when the acibenzolar technical registration was granted by EPA on August 11, 2000.

The study entitled "**Response to The EPA-EFED Review of Actigard 50WG for Registration**" is a response to the September 23, 1999 US EPA EFED OPP DER for acibenzolar environmental fate studies (MRID Nos. 44537035, 44537036, 44014253, 44537038, and 44014254).

The study entitled **"Environmental Fate Summary and Assessment of CGA-245704"** supercedes the previous summary issued in 1998 (ABR-97113, MRID 44537050).

The study entitled " **Salmonella and Escherichia/Mammalian-Microsome Mutagenicity Test**" was a requirement of acibenzolar technical registration (100-921) from EPA letter dated August 11, 2000.

The study entitled **"Product Identity, Composition and Analysis of CGA-245704 Technical "** (Addendum to MRID Number 44537003). This is related to the "thiazole" production process of acibenzolar.

Enclosed please find the transmittal document and three (3) copies of the studies referenced above.

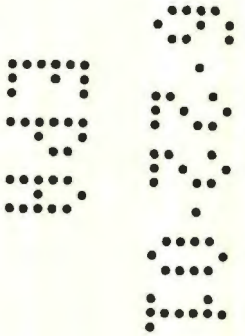
Please contact me at (336) 632-2146 if you have any questions.

Yours truly,

Larry Zang
Regulatory Product Manager

CC: Maria Rodriguez

Enclosures



JUL 17 2002

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs

SYNGENTA CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 274198300

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 07/11/02. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

Syngenta Crop Protection, Inc. Tel 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

457136-00

syngenta

FEDERAL EXPRESS

July 9, 2002

Document Processing Desk
Registration Division
Office of Pesticide Programs (H7504C)
U. S. Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall 2, Room 266A
Arlington, VA 22202

Attn: Ms. Cynthia Giles-Parker

RE: Acibenzolar-S-Methyl (EPA Reg. No. 100-921)
Actigard 50WG (EPA Reg. No. 100-922)
Conditions of Registration Letter Dated August 11, 2000, Item 4
90-Day Subchronic Neurotoxicity Study in Rats (870.6200)

Dear Ms. Giles-Parker:

Syngenta Crop Protection, Inc., is making a data submission related to the Acibenzolar-S-methyl Technical registration and the end use product Actigard 50WG issued on August 11, 2000.

Enclosed in support of this submission are:

- Data Volumes
- Transmittal Document

If you have any questions, please contact me at (336) 632-2146 or my Regulatory Assistant, Trina Brodie at (336) 632-2062.

Sincerely,

Larry Zang
Regulatory Product Manager

Enclosures

cc: Maria Rodriguez, Team 22

VOLUME 1 OF 2 OF SUBMISSION
(TRANSMITTAL DOCUMENT)

1. NAME AND ADDRESS OF SUBMITTER

SYNGENA CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 27419

2. REGULATORY ACTION IN SUPPORT OF WHICH THIS PACKAGE IS SUBMITTED

ACIBENZOLOR-S-METHYL (EPA REG. NO. 100-921)
ACTIGARD 50WG (EPA REG. NO. 100-922)
CONDITIONS OF REGISTRATION LETTER DATED AUGUST 11, 2004, ITEM 4
90-DAY SUBCHRONIC NEUROTOXICITY STUDY IN RATS

3. TRANSMITTAL DATE

07/09/2002

4. LIST OF SUBMITTED STUDIES

MRID NUMBER	VOLUME NUMBER	STUDY TITLE	EPA GUIDELINE NUMBER
	1 OF 2	TRANSMITTAL DOCUMENT	NOT APPLICABLE
45713601	2 OF 2	90-DAY SUBCHRONIC NEUROTOXICITY STUDY IN RATS WITH CGA-245704 TECHNICAL (ACIBENZOLAR-S-METHYL); STUDY NUMBER 963028; (1383) (568-96, 407335)	870.6200

COMPANY OFFICIAL: LARRY ZANG (NAME) (SIGNATURE)

COMPANY NAME: SYNGENTA CROP PROTECTION , INC.

COMPANY CONTACT: LARRY ZANG (NAME) (336) 632-2146 (PHONE)

Syngenta Crop Protection, Inc. Tel 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

457136-00

syngenta

FEDERAL EXPRESS

July 9, 2002

Document Processing Desk
Registration Division
Office of Pesticide Programs (H7504C)
U. S. Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall 2, Room 266A
Arlington, VA 22202

Attn: Ms. Cynthia Giles-Parker

RE: Acibenzolar-S-Methyl (EPA Reg. No. 100-921)
Actigard 50WG (EPA Reg. No. 100-922)
Conditions of Registration Letter Dated August 11, 2000, Item 4
90-Day Subchronic Neurotoxicity Study in Rats (870.6200)

Dear Ms. Giles-Parker:

Syngenta Crop Protection, Inc., is making a data submission related to the Acibenzolar-S-methyl Technical registration and the end use product Actigard 50WG issued on August 11, 2000.

Enclosed in support of this submission are:

- Data Volumes
- Transmittal Document

If you have any questions, please contact me at (336) 632-2146 or my Regulatory Assistant, Trina Brodie at (336) 632-2062.

Sincerely,

Larry Zang
Regulatory Product Manager

Enclosures

cc: Maria Rodriguez, Team 22

VOLUME 1 OF 2 OF SUBMISSION
(TRANSMITTAL DOCUMENT)

1. NAME AND ADDRESS OF SUBMITTER

SYNGENA CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 27419

2. REGULATORY ACTION IN SUPPORT OF WHICH THIS PACKAGE IS SUBMITTED

ACIBENZOLOR-S-METHYL (EPA REG. NO. 100-921)
ACTIGARD 50WG (EPA REG. NO. 100-922)
CONDITIONS OF REGISTRATION LETTER DATED AUGUST 11, 2004, ITEM 4
90-DAY SUBCHRONIC NEUROTOXICITY STUDY IN RATS

3. TRANSMITTAL DATE

07/09/2002

4. LIST OF SUBMITTED STUDIES

MRID NUMBER	VOLUME NUMBER	STUDY TITLE	EPA GUIDELINE NUMBER
	1 OF 2	TRANSMITTAL DOCUMENT	NOT APPLICABLE
45713601	2 OF 2	90-DAY SUBCHRONIC NEUROTOXICITY STUDY IN RATS WITH CGA-245704 TECHNICAL (ACIBENZOLAR-S-METHYL); STUDY NUMBER 963028; (1383) (568-96, 407335)	870.6200

COMPANY OFFICIAL: LARRY ZANG **(NAME)** **(SIGNATURE)**

COMPANY NAME: SYNGENTA CROP PROTECTION , INC.

COMPANY CONTACT: LARRY ZANG **(NAME)** (336) 632-2146 **(PHONE)**

This an ACCEPTED submission

01

This is a PARTIALLY ACCEPTED/COMPLETELY REJECTED submission

100-OER

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 28 2000

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

CERTIFIED

Mr. Lee Hubbard
Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419

Dear Mr. Hubbard:

Subject: Petition for Tolerances in/on Cucurbits - Compliance Report
Acibenzolar-S-Methyl (CGA-245704)
EPA Reg No 100-OER/Tolerance Petition No 0F6143
Your Correspondence Dated March 30, 2000

100-921

Enclosed please find a copy of the *Report Of Analysis for Compliance with PR Notice 86-5*. Your data have been assigned the Master Record Identification (MRID) numbers listed on the attached pages. For the volume which failed PR Notice 86-5 screen please correct the deficiency and resubmit that volume to the Agency.

If you have any questions regarding this letter, do not hesitate to contact me at (703) 305-7740 or María I. Rodríguez of my staff at (703) 305-6710.

Sincerely yours,

Cynthia Giles-Parker
Product Manager #22
Fungicide Branch
Registration Division (7505C)

Enclosure

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300
www.cp.us.novartis.com

Tel 336 632 6000

NOVARTIS

Lee Hubbard, Ph.D.
Senior Regulatory Manager
Regulatory Affairs
Tel 336-632-7034
Fax 336-292-6374
Internet Lee.Hubbard
@cp.novartis.com

May 11, 2000

Ms. Cynthia Giles-Parker, PM 22
Office of Pesticide Programs-7505C
Ariel Rios Building
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Subject: **CGA-245704 [Acibenzolar-*S*-methyl] (EPA Reg. No. 100- OER):** Notification of Intent to Amend Pesticide Petition Number ___ Requesting Tolerances for CGA-245704 in/on the Raw Agriculture Commodities of the Cucurbit Vegetable Crop Groups

Dear Ms. Giles-Parker:

As we discussed on May 3, 2000, Novartis Crop Protection, Inc., wishes to amend the petition submitted to the EPA on March 30, 2000 requesting the establishment of new tolerances for CGA-245704 (Acibenzolar-*S*-methyl – ISO proposed) on the raw agricultural commodities of the Cucurbit Vegetable Crop Group. In June of this year, Novartis will submit an amendment to the cucurbit petition requesting additional tolerances for walnuts and hops.

Please contact me if there are any questions associated with the petition or the planned amendment to this petition.

Sincerely,

Lee Hubbard

cc: Maria Rodriguez, Team 22

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300
www.cp.us.novartis.com

Tel 336 632 6000

NOVARTIS

FedEx

Lee Hubbard, Ph.D.
Senior Regulatory Manager
Regulatory Affairs
Tel 336-632-7034
Fax 336-292-6374
Internet Lee.Hubbard
@cp.novartis.com

March 30, 2000

Document Processing Desk (Petition)
Office of Pesticide Programs-7505C
Ariel Rios Building
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Attention: Ms. Cynthia Giles-Parker, PM 22

100-926

Subject: **CGA-245704 [Acibenzolar-*S*-methyl] (EPA Reg. No. 100- OER):** Requesting Tolerances for CGA-245704 in/on the Raw Agriculture Commodities of the Cucurbit Vegetable Crop Groups and Registration of the Associated Labeling for Acibenzolar-S-methyl / Trifloxystrobin

Dear Ms. Giles-Parker:

With this tolerance petition submission, Novartis Crop Protection, Inc., officially requests the establishment of new tolerances for CGA-245704 (Acibenzolar-*S*-methyl – ISO proposed) on the raw agricultural commodities of the Cucurbit Vegetable Crop Group and the approval of the enclosed proposed labeling to allow applications of Acibenzolar-S-methyl / Trifloxystrobin to the Cucurbit Vegetable Crop Group.

On April 21, 1998, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the fruiting and leafy vegetables crop groups. On May 12, 1999, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the brassica (cole) vegetables crop group.

Novartis proposes to register use of CGA-245704 for control of powdery mildew, downy mildew and gummy stem blight in cucurbit crops in combination with and CGA-279202 (trifloxystrobin), a reduced-risk product which is currently registered for use on cucurbits (Flint™, EPA Reg. No. 100-919; 40 CFR 180.555). This proposed combination product is preferred over either product alone. CGA-245704, solo, only provides suppression of

downy mildew of cucurbits. The combination with CGA-279202 shows an additive response whereby good control of downy mildew is achieved. A broader spectrum of activity is also attained with the combination product when compared to the solo CGA-279202.

This submission includes a transmittal document and:

1. Three copies of the FQPA Tolerance Petition -- Sections 408(d)(2)(A)(i) to 408(d)(2)(A)(xiii),
2. Proposed labeling for Acibenzolar-*S*-methyl / Trifloxystrobin (5 copies each),
3. Completed Application for Registration (Form 8570-1) request forms for Acibenzolar-*S*-methyl / Trifloxystrobin.
4. Two volumes of data (3 copies each) supporting the requested tolerances,
5. A disk containing a draft Notice of Filing (Word Perfect).

A check in the amount of $15,550 has been forwarded to the EPA Accounting Office in Pittsburgh along with a copy of this letter to support consideration of this petition by the EPA.

Thank you for your consideration of an expedited review of this petition and labeling according the Reduced Risk Initiative. Please contact me if there are any questions associated with the petition or labeling.

Sincerely,

Lee Hubbard

cc: Luis Suguiyama, Fungicide Branch Chief (letter only)
Maria Rodriguez, Team 22 (letter only)
EPA Accounting Office; Pittsburgh, PA (letter only)

lee.hubbard@cp.novartis.com on 04/26/2000 05:02:15 PM

To: Maria Rodriguez/DC/USEPA/US@EPA
cc:
Subject: RE: Acibenzolar-S-Methyl in/on Cucurbits - Compliance

---

Maria:

Thanks again for inserting the missing pages for us.

I have a meeting scheduled with Luis Suguiyama and Mary Waller on Wednesday afternoon (5/3/00) to discuss mefenoxam.

Would it be possible to meet with you, Cynthia, and/or Luis the morning of 5/3/00 to discuss registration of a tobacco-only label for Actigard?

Thanks,

Lee Hubbard
phone - (336) 632-7034
fax - (336) 292-6374

-----Original Message-----
From: Rodriguez.Maria@epamail.epa.gov
[mailto:Rodriguez.Maria@epamail.epa.gov]
Sent: Wednesday, April 26, 2000 4:44 PM
To: Hubbard Lee CP USGR EXC
Subject: Acibenzolar-S-Methyl in/on Cucurbits - Compliance

Re: Report on Compliance with PR-Notice 86-5 for Acibenzolar-S-Methyl in/on
Cucurbits

Lee:

Just a note to let you know that I received the submission from Dick Conn earlier today. The pages that were missing have been inserted in the study and
I will proceed with the screening, etc. as usual. Just to let you know, an official (certified) letter will be in the postal service requesting that you
comply with the requirement. You have already complied by sending the missing

pages with Mr. Conn. Thanks for your prompt response.

Maria

Maria Rodriguez 04/26/2000 04:44 PM

To: lee.hubbard@cp.novartis.com
cc:
Subject: Acibenzolar-S-Methyl in/on Cucurbits - Compliance

Re: Report on Compliance with PR-Notice 86-5 for Acibenzolar-S-Methyl in/on Cucurbits

Lee:

Just a note to let you know that I received the submission from Dick Conn earlier today. The pages that were missing have been inserted in the study and I will proceed with the screening, etc. as usual. Just to let you know, an official (certified) letter will be in the postal service requesting that you comply with the requirement. You have already complied by sending the missing pages with Mr. Conn. Thanks for your prompt response.

Maria

lee.hubbard@cp.novartis.com on 04/25/2000 11:56:19 AM

To: Maria Rodriguez/DC/USEPA/US@EPA
cc: rconn@ix.netcom.com
Subject: Acibenzolar-S-methyl [100-OER] -- cucurbits

Dear Maria:

Thank you for your phone call.
Pages 223, 224, & 225, missing from the report for NCP Study No. 131-98 (Volume number 3 of the March 30, 2000 submission; Acibenzolar-S-methyl and trifloxystrobin residue chemistry on cucurbits), will be delivered to you tomorrow by Dick Conn.

We appreciate your inserting the missing pages for us. Sorry for the inconvenience.

Best regards,

Lee Hubbard
phone - (336) 632-7034
fax - (336) 292-6374

Batch 31
Box 2
Jacket-067003 (000100-00921)

[Federal Register: xxxxxxxxxxxx, 2000 (Volume xx, Number xx)][Notices]
[Page xxxx - xxxx]

ENVIRONMENTAL PROTECTION AGENCY

[PF-xxx; FRL-xxxxx]

Novartis Crop Protection; Notice of Filing a Pesticide Petition To Establish a Tolerance for Certain Pesticide Chemicals in or on Food

AGENCY: Environmental Protection Agency (EPA)

ACTION: Notice

SUMMARY: This notice announces the initial filing of a pesticide petition proposing the establishment of regulations for residues of certain pesticide chemicals in or on various food commodities.

DATES: Comments, identified by docket control number PF-xxx, must be received on or before March 6, 2000.

ADDRESSES: Comments may be submitted by mail, electronically, or in person. Please follow the detailed instructions for each method as provided in Unit I.C. of the SUPPLEMENTARY INFORMATION. To ensure proper receipt by EPA, it is imperative that you identify docket control number PF-xxx in the subject line on the first page of your response.

FOR FURTHER INFORMATION CONTACT: By mail: Cynthia Giles-Parker (PM 22), Registration Division (7505C), Office of Pesticide Programs, Environmental Protection Agency, Ariel Rios Bldg., 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (703) 305-7740; and e-mail address: giles-parker.cynthia@epamail.epa.gov.SUPPLEMENTARY INFORMATION:

General Information

A. Does this Action Apply to Me?

You may be affected by this action if you are an agricultural producer, food manufacturer or pesticide manufacturer. Potentially affected categories and entities may include, but are not limited to:

Categories	NAICS codes	Examples of potentially affected entities
Industry	111	Crop production
	112	Animal production
	311	Food manufacturing
	32532	Pesticide manufacturing

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in the table could also be affected. The North American Industrial Classification System (NAICS) codes have been provided to assist you and others in determining whether or not this action might apply to certain entities. If you have questions regarding the applicability of this action to a particular entity, consult the person listed under FOR FURTHER INFORMATION CONTACT

B. How Can I Get Additional Information, Including Copies of this Document and Other Related Documents?

1. Electronically. You may obtain electronic copies of this document, and certain other related documents that might be available electronically, from

the EPA Internet Home Page at http://www.epa.gov/. To access this document, on the Home Page select ``Laws and Regulations'' and then look up the entry for this document under the ``Federal Register--Environmental Documents.'' You can also go directly to the Federal Register listings at http://www.epa.gov/fedrgstr/.

2. In person. The Agency has established an official record for this action under docket control number PF-XXX. The official record consists of the documents specifically referenced in this action, any public comments received during an applicable comment period, and other information related to this action, including any information claimed as confidential business information (CBI). This official record includes the documents that are physically located in the docket, as well as the documents that are referenced in those documents. The public version of the official record does not include any information claimed as CBI. The public version of the official record, which includes printed, paper versions of any electronic comments submitted during an applicable comment period, is available for inspection in the Public Information and Records Integrity Branch (PIRIB), Rm. 119, Crystal Mall #2 (CM #2), 1921 Jefferson Davis Highway, Arlington, VA, from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The PIRIB telephone number is (703) 305-5805.

C. How and to Whom Do I Submit Comments?

You may submit comments through the mail, in person, or electronically. To ensure proper receipt by EPA, it is imperative that you identify docket control number PF-XXX in the subject line on the first page of your response.

1. By mail. Submit your comments to: Public Information and Records Integrity Branch (PIRIB), Information Resources and Services Division (7502C), Office of Pesticide Programs (OPP), Environmental Protection Agency, Ariel Rios Bldg., 1200 Pennsylvania Ave., NW., Washington, DC20460.

2. In person or by courier. Deliver your comments to: Public Information and Records Integrity Branch (PIRIB), Information Resources and Services Division (7502C), Office of Pesticide Programs (OPP), Environmental Protection Agency, Rm. 119, CM #2, 1921 Jefferson Davis Highway, Arlington, VA. The PIRIB is open from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The PIRIB telephone number is (703) 305-5805.

3. Electronically. You may submit your comments electronically by e-mail to: ``opp-docket@epa.gov,'' or you can submit a computer disk as described above. Do not submit any information electronically that you consider to be CBI. Avoid the use of special characters and any form of encryption. Electronic submissions will be accepted in Wordperfect 6.1/8.0 or ASCII file format. All comments in electronic form must be identified by docket control number PF-XXX. Electronic comments may also be filed online at many Federal Depository Libraries.

D. How Should I Handle CBI That I Want to Submit to the Agency?

Do not submit any information electronically that you consider to be CBI. You may claim information that you submit to EPA in response to this document as CBI by marking any part or all of that information as CBI. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. In addition to one complete version of the comment that includes any information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public version of the official record. Information not marked confidential will be included in the public version of the official record without prior notice. If you have any questions about CBI or the procedures for claiming CBI, please consult the person identified under FOR FURTHER NFORMATION CONTACT

E. What Should I Consider as I Prepare My Comments for EPA?

You may find the following suggestions helpful for preparing your comments:

1. Explain your views as clearly as possible.

2. Describe any assumptions that you used.
3. Provide copies of any technical information and/or data you used that support your views.
4. If you estimate potential burden or costs, explain how you arrived at the estimate that you provide.
5. Provide specific examples to illustrate your concerns.
6. Make sure to submit your comments by the deadline in this notice.
7. To ensure proper receipt by EPA, be sure to identify the docket control number assigned to this action in the subject line on the first page of your response. You may also provide the name, date, and Federal Register citation.

II. What Action is the Agency Taking?

EPA has received a pesticide petition as follows proposing the establishment and/or amendment of regulations for residues of certain pesticide chemicals in or on various food commodities under section 408 of the Federal Food, Drug, and Comestic Act (FFDCA), 21 U.S.C. 346a. EPA has determined that this petition contains data or information regarding the elements set forth in section 408(d)(2); however, EPA has not fully evaluated the sufficiency of the submitted data at this time or whether the data supports granting of the petition. Additional data may be needed before EPA rules on the petition.

List of Subjects

Environmental protection, Agricultural commodities, Feed additives, Food additives, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: January 24, 2000.

James Jones,
Director, Registration Division,
Office of Pesticide Programs.

Summary of Petition

xFxxxx
The petitioner summary of the pesticide petition is printed below as required by section 408(d)(3) of the FFDCA. The summary of the petition was prepared by the petitioner and represents the view of the petitioner. EPA is publishing the petition summary verbatim without editing it in any way. The petition summary announces the availability of a description of the analytical methods available to EPA for the detection and measurement of the pesticide chemical residues or an explanation of why no such method is needed.
EPA has received a pesticide petition (xFxxxx) from Novartis Crop Protection, P.O. Box 18300, Greensboro, NC 27419 proposing, pursuant to section 408(d) of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 346a(d), to amend 40 CFR part 180 by establishing a tolerance for residues of 1,2,3-benzothiadiazole-7-carbothioic acid S-methyl ester (acibenzolar-S-methyl) in or on the raw agricultural commodity cucurbit vegetables crop group at 1.0 parts per million (ppm). EPA has determined that the petition contains data or information regarding the elements set forth in section 408(d)(2) of the FFDCA; however, EPA has not fully evaluated the sufficiency of the submitted data at this time or whether the data supports granting of the petition. Additional data may be needed before EPA rules on the petition.

A. Residue Chemistry
1. Plant metabolism. Novartis believes the metabolism of acibenzolar-S-methyl has been well characterized. Only 4.6% and 14.9% of the total radioactive residue (TRR) was non-extractable in lettuce at the recommended application rate and three times the recommended application rate, respectively. Non-extractables were also low in a tomato metabolism study, 3.4% and 7.4% in tomatoes and foliage, respectively. The metabolism in these crops proceeded via hydrolysis of benzo [1,2,3] thiadiazole-7-carbothioic acid

S-methyl ester to benzo [1,2,3] thiadiazole-7-carboxylic acid (BTCA), followed by conjugation as ester, glycoside and/or other plant constituents. The metabolism profile supports the use of an analytical enforcement method that accounts for acibenzolar-S-methyl and metabolites containing the benzo [1,2,3] thiadiazole-7-carboxylic acid (BTCA) moiety.

2. Analytical method. Novartis Analytical Method AG-671A is a practical and valid method for the determination and confirmation of CGA-245704 (acibenzolar-S-methyl) in raw agricultural commodities (RAC) and processing substrates from the tobacco, leafy (including brassica) and fruiting vegetable crop groups at a limit of quantitation (LOQ) of 0.02 ppm. The method involves extraction, solid phase cleanup of samples with analysis by high performance liquid chromotography (HPLC) with ultraviolet (UV) detection or confirmatory LC/MS. The validity is demonstrated by the acceptable accuracy and precision obtained on numerous procedural recovery samples (radiovalidation and field trial sample sets), and by the extractability and accountability obtained by the analysis of weathered radioactive substrates using Analytical Method AG-671A.

3. Magnitude of residues. This petition is supported by 19 field trials conducted on representative members of the cucurbit vegetable crop groupings. All samples were analyzed for by the total residue method (AG-671A) to determine the combined residues of acibenzolar-S-methyl and metabolites, which contain the benzo [1,2,3] thiadiazole-7-carboxylic acid (BTCA) moiety. In cucurbit vegetables, the maximum residues found on representative commodities were 0.95 ppm, 0.43 ppm, and 0.18 ppm, for cantaloupes, cucumbers, and summer squash, respectively. A tolerance of 1.0 ppm for the cucurbit vegetable crop group has been proposed.

B. Toxicological Profile

1. Acute toxicity. The risk from acute dietary exposure to acibenzolar-S-methyl is considered to be very low. CGA-245704 and the formulated 50 WG product have low orders of acute toxicity by the oral, dermal and inhalation exposure routes. Results from acute studies all fall within toxicity rating categories of III or IV. CGA-245704 technical has a low order of acute toxicity, is only slightly irritating to skin and eyes, but may cause sensitization by skin contact. An LD50 of greater than 5,000 milligrams/kilograms (mg/kg) was observed for the acute oral toxicity study in rats. The lowest no observed adverse effect level (NOAEL) in a short-term exposure scenario, identified as 50 mg/kg/day in the rabbit teratology study, is higher than the chronic NOAEL. The lowest observed adverse effect level (LOAEL) in the rat in teratology study was identified as 10 mg/kg/day. The following are results from the acute toxicity tests conducted on the technical material:

i. Rat oral LD50 > 5,000 mg/kg/bwt male/female (M/F)toxicity Category IV.
ii. Rat dermal LD50 > 2,000 mg/kg/bwt (M/F) toxicity Category III.
iii. Acute inhalation LC50 > 5,000 mg/L (M/F) toxicity Category IV.
iv. Rabbit eye irritation: Minimally irritating--toxicity Category III.
v. Rabbit dermal irritation: Slightly irritating--toxicity Category IV.
vi. Dermal sensitization: Sensitizer.

2. Genotoxicty. CGA-245704 technical was not mutagenic or clastogenic and did not provoke unscheduled DNA synthesis when tested thoroughly in a battery of standard in vivo, and in vitro independent assays, using both eukaryotes and prokaryotes, and with or without metabolic activation. These tests are summarized below:

i. Microbial/Microsome Mutagenicity Assay: Non-mutagenic.
ii. Mammalian Cell Chinese Hampster Ovary (CHO) Mutagenicity Assay: Non-mutagenic; Non-clastogenic.
iii. Chinese Hampster (CH) Bone marrow: Non-clastogenic; negative for chromosome aberrations.
iv. Mouse Micronucleus Test: Non-clastogenic; negative for chromosome aberrations.
v. DNA Damage and Repair Rat hepatocyte: Negative.

3. Reproductive and developmental toxicity. Acibenzolar-S-methyl is not a teratogenic hazard except at levels close to the maximum tolerated dose. In the rat multigeneration study, CGA-245704 (acibenzolar-S-methyl) technical had

no effect on rat reproductive parameters including gonadal function, estrus cycles, mating behavior, conception, parturition, lactation, weaning, and sex organ histopathology. At 4,000 ppm, parental body weights (bwt) were reduced. This demonstrated by the results of the following studies:

i. Rat oral teratology--Maternal NOAEL of 200 mg/kg based on embryotoxicity and teratogenic effects; fetal LOAEL of 10 mg/kg.

ii. Rabbit oral teratology study--Maternal NOAEL of 50 mg/kg based on maternal toxicity and slightly delayed ossification; fetal NOAEL of 300 mg/kg based on changes in bwt.

iii. Rat 2-generation reproduction study--NOAEL of 25 mg/kg based on weight development in adults at 4,000 ppm and pups during lactation at 2,000 ppm and above. No adverse effects on reproduction orfertility.

4. Subchronic toxicity. No signs of neurotoxicity were noted with CGA-245704 in both acute and subchronic studies even at the highest dose levels of 800 mg/kg and 8,000 ppm, respectively. The evaluated parameters included functional observation battery, motor activity measurement and neurohistopathologic assessment. These tests are summarized below:

i. Rat 28-day dermal study--NOAEL of 1,000 mg/kg/day.

ii. Dog 90-day feeding study--NOAEL of 10 mg based on reduced bwt gain at 50 mg/kg/day.

iii. Mouse 90-day feeding--NOAEL of 30 mg/kg based on reduced bwt development at 1,000 ppm and above.

iv. Rat 90-day feeding study--NOAEL of 25 mg/kg based on inappetence and reduced bwt development at higher dose levels (4,000, and 8,000 ppm).

5. Chronic toxicity. Based on the available chronic toxicity data, Novartis Crop Protection, Inc. believes the Reference Dose (RfD) for acibenzolar-S-methyl is 0.11 mg/kg/day. Acibenzolar-S-methyl is not oncogenic in rats or mice and is not likely to be carcinogenic in humans. No carcinogenic activity was detected in mice and rats at the Maximum Tolerated Dose (MTD). There was no evidence of carcinogenicity in an 18-month feeding study in mice and a 24-month feeding study in rats. Dosage levels in both the mouse and the rat studies were adequate for identifying a cancer risk. Novartis believes acibenzolar-S-methyl should be classified as a ``Not Likely'' carcinogen based on the lack of carcinogenicity in rats and mice.

6. Animal metabolism. Metabolism proceeded primarily via hydrolysis to form the corresponding carboxylic acid (BTCA) which was subsequently conjugated with several amino acids including glycine, lysine and ornithine. Elimination was rapid in all cases. Oxidation of the aromatic ring of the acid was a very minor pathway observed in goats. The metabolic fate of CGA-245704 in plants paralleled that observed in animals. The major metabolite in all test systems was the same hydrolysis product BTCA. Thus, the metabolism profile supports the use of an analytical enforcement method that accounts principally for parent and BTCA.

7. Metabolite toxicology. In short-term toxicity studies in rats, CGA-210007 was found to be of, at most, equal or less toxicity than the parent compound. As with parent CGA-245704, the subchronic NOAEL for CGA-210007 was 100 mg/kg bwt.

8. Endocrine disruption. Acibenzolar-S-methyl does not belong to a class of chemicals known or suspected of having adverse effects on the endocrine system. Developmental toxicity studies in rats and rabbits and a reproduction study in rats gave no indication that acibenzolar-S-methyl might have any effects on endocrine function related to development and reproduction. Acibenzolar-S-methyl is not a teratogenic hazard except at, or close to, the maximum tolerated dose. The chronic studies also showed no evidence of a long-term effect related to the endocrine system.

C. Aggregate Exposure

1. Dietary exposure--i. Food. For the purposes of assessing the potential dietary exposure under the proposed tolerances, Novartis has estimated aggregate from the previously requested tolerances for the raw agricultural commodities: leafy vegetables (excluding spinach) at 0.25 ppm; spinach at 1.0 ppm; fruiting vegetables at 1.0 ppm (PP 8F4974); and for brassica leafy vegetables at 1.0 ppm and bananas at 0.1 ppm (PP 9F6004); and the requested tolerances for cucurbit vegetables at 1.0 ppm PP xFxxxx). Maximum expected

chronic exposure to CGA-245704 in the diets of the most sensitive sub-population, females (13-50 years), was calculated to be 0.7% of the RfD. For the U.S. population (48 contiguous States) chronic exposure was 0.3% of the RfD. Acute exposure to the most sensitive sub-population, females (13-50 years), was 47.9% of the acute RfD (aRfD). Acute exposure to the U.S. population was 1.2% of the aRfD. Dietary exposure analyses for CGA-245704 (and CGA-210007) were conducted using anticipated residues generated from field trials conducted at the maximum use rate and minimum pre-harvest interval (PHI). In addition, actual dietary exposure would be much less than the estimates made herein since significant residue reduction often takes place in commerce and during food preparation and cooking. These results (minimal exposure) show more than a reasonable certainty of no harm.

ii. Drinking water. The potential for exposure to CGA-245704 through drinking water (surface or ground water) is slight due to the minimal level of this chemical anticipated to reach these bodies of water. This expectation is based on the rapid degradation of CGA-245704 and the recommended low use rates that will further restrict the amount of chemical available for leaching or run-off. A Maximum Contaminant Level Goal (MCLG) of 350 parts per billion (ppb) has been calculated for CGA-245704. This calculated safe exposure value is substantially above the levels that are likely to be found in the environment under proposed conditions of use.

2. Non-dietary exposure. Novartis believes that the potential for non-occupational exposure to the general public is unlikely except for potential residues in food crops discussed above. The proposed uses for acibenzolar-S-methyl are for agricultural crops and the product is not used residentially in or around the home.

D. Cumulative Effects

Consideration of a common mechanism of toxicity is not appropriate at this time since there is no information to indicate that toxic effects produced by acibenzolar-S-methyl would be cumulative with those of any other chemicals. Acibenzolar-S-methyl is a plant activator and no other compounds in this class are registered in the United States. Consequently, Novartis is considering only the potential exposure to acibenzolar-S-methyl in its aggregate risk assessment.

E. Safety Determination

1. U.S. population. For the U.S. population (48 contiguous States) chronic exposure was 0.3% of the RfD. Acute dietary exposure is also minimal. Acute exposure to the U.S. population was 1.2% of the aRfD. EPA usually has no concern for exposures below 100% of the RfD because the RfD represents the level at or below which daily aggregate dietary exposure over a lifetime will not pose appreciable risks to human health. Novartis concludes that there is a reasonable certainty that no harm will result from aggregate exposure to acibenzolar-S-methylresidues.

2. Infants and children. Embryotoxicity and fetotoxicity were apparent at maternally toxic doses of CGA-245704 technical in rats and rabbits. The lowest NOAEL for this effect was established in the 2-generation reproduction study at 25 mg/kg (200 ppm).

Maximum expected chronic exposure to CGA-245704 in the diets of the most sensitive sub-population, females (13-50 years), was calculated to be 0.7% of the RfD. Exposure to the most sensitive sub-population, females (13-50 years), was 49.7% of the aRfD.

Additionally, CGA-245704 is not a reproductive toxin. Some signs of teratogenicity were found close to maternally toxic doses. No neurotoxic effects or oncogenic activity has been observed with CGA-245704. From these available toxicology data, no special susceptibility of infants or children is anticipated.

Dietary exposure analyses for CGA-245704 (and CGA-210007) were conducted using anticipated residues generated from field trials conducted at the maximum use rate and minimum pre-harvest interval (PHI). In addition, actual dietary exposure would be much less than the estimates made herein since significant residue reduction often takes place in commerce and during food

preparation and cooking. These results show more than a reasonable certainty of no harm.

Exposure to residues of CGA-245704 and CGA-210007 in consumed food is minimal. Both chronic and acute exposure estimates demonstrate the use of CGA-245704 on crops results in more than a reasonable certainty of no harm. The results herein are conservative since field trial residues utilized in these assessments were generated under maximum label use rates and minimum pre-harvest intervals.

F. International Tolerances

Codex maximum residue levels (MRLs) have not been established for residues of CGA-245704 in or on raw agricultural commodities from the fruiting vegetable and leafy vegetable crop groups. Maximum residue levels of 0.1 ppm have been established for CGA-245704 on wheat in Switzerland and Hungary. MRLs of 1.0 ppm on tomatoes and 0.1 ppm on bananas, cereals, wheat, spring barley, and rice have been registered in Japan.

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 1 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 2 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000	EPA Reg No./File Symbol 100-OER)	Page 3 of 10
Applicant's/Registrant's Name & Address Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 4 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 5 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 6 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 7 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000	EPA Reg No./File Symbol 100-OER)	Page 8 of 10
Applicant's/Registrant's Name & Address Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 9 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 10 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]					
			Novartis Crop Protection	OWN	
			Novartis Crop Protection	OWN	

Signature	Name and Title Sr. Reg Affairs Manager	Date 3/30/00

EPA Form 8570-35(9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal Use Copy

00-052

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 1 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
§158.150 830-1550	Product Chemistry CHEMICAL IDENTITY	 44014201 44014202 44537003	Novartis Crop Protection	OWN	
830-1600	STATEMENT OF COMPOSITION	44014201 44014202 44537003	Novartis Crop Protection	OWN	
830-1670	DISCUSSION OF FORMATION OF INGREDIENTS	44014201 44014202 44537003	Novartis Crop Protection	OWN	
§158.162 830-1620		 44537003	Novartis Crop Protection	OWN	
§158.170 830-1700	Preliminary Analysis PRELIMINARY ANALYSIS	 44014203 44537003	Novartis Crop Protection	OWN	
§158.175 830-1750	Certified Limits CERTIFICATION OF LIMITS	 44014202 44014203 44537003	Novartis Crop Protection	OWN	
§158.180	Enforcement Analytical Method		Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000	EPA Reg No./File Symbol 100-OER)	Page 2 of 10
Applicant's/Registrant's Name & Address Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830-1800	ANALYTICAL METHOD	44014202 44014203 44537003			
§158.190 063	Physical and Chemical Characteristics PHYSICAL/CHEMICAL PROPERTIES	 44014202	Novartis Crop Protection	OWN	
830-6302	COLOR	44014202 44014204	Novartis Crop Protection	OWN	
830-6303	PHYSICAL STATE	44014202 44014204	Novartis Crop Protection	OWN	
830-6304	ODOR	44014202 44014204	Novartis Crop Protection	OWN	
830-6313	STABILITY	44014204 44537001	Novartis Crop Protection	OWN	
830-6314	OXIDIZING/REDUCING ACTION	44014202 44014204	Novartis Crop Protection	OWN	
830-6315	FLAMMABILITY	44014202 44014204	Novartis Crop Protection	OWN	
830-6316	EXPLODABILITY	44014202 44014204	Novartis Crop Protection	OWN	
830-6317	STORAGE STABILITY	44014202 44014204 44537001	Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 3 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
		44537002			
830-6319	MISCIBILITY	44014202 44014204	Novartis Crop Protection	OWN	
830-6320	CORROSION CHARACTERISTICS	44014202 44014204 44537001 44537002	Novartis Crop Protection	OWN	
830-6321	DIELECTRIC BREAKDOWN VOLT	44014202 44014204	Novartis Crop Protection	OWN	
830-7000	PH	44014202 44014204	Novartis Crop Protection	OWN	
830-7100	VISCOSITY	44014202 44014204	Novartis Crop Protection	OWN	
830-7220	BOILING POINT	44014204	Novartis Crop Protection	OWN	
830-7300	DENSITY	44014202 44014204	Novartis Crop Protection	OWN	
830-7370	DISSOCIATION CONSTANT	44014204	Novartis Crop Protection	OWN	
830-7570	OCT/WATER PARTITION COEF.	44014204	Novartis Crop Protection	OWN	
830-7860	SOLUBILITY	44014204	Novartis Crop Protection	OWN	
830-7950	VAPOR PRESSURE	44014204	Novartis Crop Protection	OWN	
§158.240	Residue Chemistry	44014255 44537051	Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 4 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860-1300	NATURE OF RESIDUE - LIVESTOCK,PLANTS	44537052 44537053 44537054			
860-1340	RES. ANALYTICAL METHOD - PLANT	44537055 44537056 44537057 44537058 44828002	Novartis Crop Protection	OWN	
860-1380	STORAGE STABILITY	44537059 44993301	Novartis Crop Protection	OWN	
860-1500	CROP FIELD TRIALS	44537060 44537061 44537062 44828003 44828004 44828005 44828006 44828007 44828008 44828009 44828010 44828011 44828012 44828013	Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 5 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
		44828014 44828015 44828016 44828017 44828018 44828019 44828020 44828021 44828022 44828023 44828024 44890801			
860-1850	CONFINED ROTATIONAL CROP	44537063 44993302	Novartis Crop Protection	OWN	
860-1900	FIELD ROTATIONAL CROP	44828025	Novartis Crop Protection	OWN	
§158.290 161-1	Environmental Fate HYDROLYSIS	 44014252	Novartis Crop Protection	OWN	
161-2	PHOTODEGRADATION - WATER	44537034	Novartis Crop Protection	OWN	
161-3	PHOTODEGRADATION - SOIL	44537035 44537036	Novartis Crop Protection	OWN	
162-2	ANAEROBIC SOIL METABOLISM	44014253	Novartis Crop Protection	OWN	
162-3	ANAEROBIC AQUATIC	44537037	Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000	EPA Reg No./File Symbol 100-OER)	Page 6 of 10
Applicant's/Registrant's Name & Address Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
	METABOLISM				
162-4	AEROBIC AQUATIC METABOLISM	44537038	Novartis Crop Protection	OWN	
163-1	LEACHING/ADSORPTION/DESORPTION	44014254 44537040 44537041 44537042	Novartis Crop Protection	OWN	
164-1	TERRESTRIAL FIELD DISSIPATION	44537043 44537044 44537045 44537046 44537047 44537048	Novartis Crop Protection	OWN	
165-4	BIOACCUMULATION IN FISH	44537049	Novartis Crop Protection	OWN	
§158.340	Toxicology		Novartis Crop Protection	OWN	
081-1	ACUTE ORAL TOX. RAT	44014214 44014215 44537021 44537022 44537023			
081-2	ACUTE DERMAL TOX. RABBIT/RAT	44014216 44014217	Novartis Crop Protection	OWN	
081-3	ACUTE INHALATION TOX. RAT	44014218	Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 7 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
		44014219			
081-4	PRIMARY EYE IRRITATION-RABBIT	44014220 44014221	Novartis Crop Protection	OWN	
081-5	PRIMARY DERMAL IRRITATION	44014222 44014223	Novartis Crop Protection	OWN	
081-6	DERMAL SENSITIZATION	44014224 44014225	Novartis Crop Protection	OWN	
082-1A	90-DAY FEEDING-RODENT	44014227 44014228 44014229 44014230	Novartis Crop Protection	OWN	
082-1B	90-DAY FEEDING-NONRODENT	44014231 44014232	Novartis Crop Protection	OWN	
082-2	21-DAY DERMAL-RABBIT/RAT	44014233	Novartis Crop Protection	OWN	
083-1B	CHRONIC TOX - NONRODENT	44014234	Novartis Crop Protection	OWN	
083-2B	ONCOGENICITY - MOUSE	44014235	Novartis Crop Protection	OWN	
083-3A	TERATOGENICITY - RAT	44014236 44014237 44014238 44014239 44014240	Novartis Crop Protection	OWN	
083-4	2-GENERATION REPRO. - RAT	44014241	Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 8 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
		44681301			
083-5	COMBINED ONCOGENICITY - RAT	44014243	Novartis Crop Protection	OWN	
084-2A	GENE MUTATION - AMES	44014244 44014245 44014246 44014247 44537024 44537025 44537026	Novartis Crop Protection	OWN	
084-4	OTHER GENOTOXIC EFFECTS	44014248	Novartis Crop Protection	OWN	
085-1	GENERAL METABOLISM	44014250	Novartis Crop Protection	OWN	
§158.490 071-1A	Wildlife and Aquatic Organisms ACUTE AVIAN ORAL QUAIL/DUCK	44014207 44014208 44537004 44537005	Novartis Crop Protection	OWN	
071-2A	ACUTE AVIAN DIET. QUAIL	44014209 44537006	Novartis Crop Protection	OWN	
071-2B	ACUTE AVIAN DIET. DUCK	44014210 44537008	Novartis Crop Protection	OWN	
071-4A	AVIAN REPRO. QUAIL	44537009	Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 9 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
071-4B	AVIAN REPRO. DUCK	44537010	Novartis Crop Protection	OWN	
072-1A	FISH TOXICITY BLUEGILL	44014211 44537011	Novartis Crop Protection	OWN	
072-1C	FISH TOXICITY RAINBOW TROUT	44014212 44537012 44537013	Novartis Crop Protection	OWN	
072-2A	INVERTEBRATE TOXICITY	44014213 44537014 44537015	Novartis Crop Protection	OWN	
072-3A	ESTUARINE/MARINE TOX. FISH	44537016	Novartis Crop Protection	OWN	
072-3B	ESTUARINE/MARINE TOX. MOLLUSK	44537017	Novartis Crop Protection	OWN	
072-3C	ESTUARINE/MARINE TOX. SHRIMP	44537018	Novartis Crop Protection	OWN	
072-4A	EARLY LIFE STAGE FISH	44537019	Novartis Crop Protection	OWN	
072-4B	LIFE CYCLE INVERTEBRATE	44537020	Novartis Crop Protection	OWN	
§158.540 122-1	Plant Protection VEGETATIVE VIGOR	 44537028 44537029	Novartis Crop Protection	OWN	
123-2	AQUATIC PLANT GROWTH	44537030 44537031	Novartis Crop Protection	OWN	

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per session for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to : Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not sent the form to this address.

DATA MATRIX

Date March 30, 2000		EPA Reg No./File Symbol 100-OER)	Page 10 of 10
Applicant's/Registrant's Name & Address	Novartis Crop Protection P.O. Box 18300 Greensboro, NC 27419-8300	Product Acibenzolar-S-methyl Technical	
Ingredient CGA-245704			

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
		44537032			
§158.590	Nontarget Insect		Novartis Crop Protection	OWN	
141-1	HONEY BEE ACUTE CONTACT	44014251 44537033			
999-99	NO EPA GUIDELINE # REQUIRED	44014205 44014206 44014226 44014242 44014249 44537007 44537027 44537039 44537050 44537064	Novartis Crop Protection	OWN	

Signature	Name and Title Sr Reg. Affairs Manager	Date 3/30/00

EPA Form 8570-35(9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal Use Copy

Maria –

Corrected copy

This is an ACCEPTED submission.

C. Giles Parker

One copy of the PPC diagnosis and one copy of the annotated bibliography are provided for your files. The PPC has already mailed out the submitter's copy of the two documents.

This is a PARTIALLY ACCEPTED/COMPLETELY REJECTED submission.

A copy of the PPC diagnosis and the annotated bibliography are provided for your files. A second copy is provided for your use in corresponding with the data submitter.

MAY 5 2000

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs

NOVARTIS CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 274198300

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 03/31/00. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300
www.cp.us.novartis.com

Tel 336 632 6000

NOVARTIS

FedEx

Lee Hubbard, Ph.D.
Senior Regulatory Manager
Regulatory Affairs
Tel 336-632-7034
Fax 336-292-6374
Internet Lee.Hubbard
@cp.novartis.com

451053-00

March 30, 2000

Document Processing Desk (Petition)
Office of Pesticide Programs-7505C
Ariel Rios Building
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Attention: Ms. Cynthia Giles-Parker, PM 22

Subject: **CGA-245704 [Acibenzolar-S-methyl] (EPA Reg. No. 100- OER):** Requesting Tolerances for CGA-245704 in/on the Raw Agriculture Commodities of the Cucurbit Vegetable Crop Groups and Registration of the Associated Labeling for Acibenzolar-S-methyl / Trifloxystrobin

Dear Ms. Giles-Parker:

With this tolerance petition submission, Novartis Crop Protection, Inc., officially requests the establishment of new tolerances for CGA-245704 (Acibenzolar-S-methyl – ISO proposed) on the raw agricultural commodities of the Cucurbit Vegetable Crop Group and the approval of the enclosed proposed labeling to allow applications of Acibenzolar-S-methyl / Trifloxystrobin to the Cucurbit Vegetable Crop Group.

On April 21, 1998, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the fruiting and leafy vegetables crop groups. On May 12, 1999, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the brassica (cole) vegetables crop group.

Novartis proposes to register use of CGA-245704 for control of powdery mildew, downy mildew and gummy stem blight in cucurbit crops in combination with and CGA-279202 (trifloxystrobin), a reduced-risk product which is currently registered for use on cucurbits (Flint™, EPA Reg. No. 100-919; 40 CFR 180.555). This proposed combination product is preferred over either product alone. CGA-245704, solo, only provides suppression of

downy mildew of cucurbits. The combination with CGA-279202 shows an additive response whereby good control of downy mildew is achieved. A broader spectrum of activity is also attained with the combination product when compared to the solo CGA-279202.

This submission includes a transmittal document and:

1. Three copies of the FQPA Tolerance Petition -- Sections 408(d)(2)(A)(i) to 408(d)(2)(A)(xiii),

2. Proposed labeling for Acibenzolar-*S*-methyl / Trifloxystrobin (5 copies each),

3. Completed Application for Registration (Form 8570-1) request forms for Acibenzolar-*S*-methyl / Trifloxystrobin.

4. Two volumes of data (3 copies each) supporting the requested tolerances,

5. A disk containing a draft Notice of Filing (Word Perfect).

A check in the amount of $15,550 has been forwarded to the EPA Accounting Office in Pittsburgh along with a copy of this letter to support consideration of this petition by the EPA.

Thank you for your consideration of an expedited review of this petition and labeling according the Reduced Risk Initiative. Please contact me if there are any questions associated with the petition or labeling.

Sincerely,

Lee Hubbard

cc: Luis Suguiyama, Fungicide Branch Chief (letter only)
Maria Rodriguez, Team 22 (letter only)
EPA Accounting Office; Pittsburgh, PA (letter only)

VOLUME 1 OF 3 OF SUBMISSION
(TRANSMITTAL DOCUMENT)

1. **Name and Address of Submitter**

   Novartis Crop Protection, Inc.
   P.O. Box 18300
   Greensboro, NC 27419

2. **Regulatory Action in Support of which this Package is Submitted**

   ACIBENZOLAR-S-METHYL TECHNICAL
   REQUESTING TOLERANCES IN THE CURCURBIT CROP GROUP

3. **Transmittal Date**

   March 30, 2000

4. **List of Submitted Studies**

MRID NUMBER	VOLUME NUMBER	STUDY TITLE	EPA GUIDELINE NUMBER
	1 of 3	TRANSMITTAL DOCUMENT	NOT APPLICABLE
45089701	2 of 3	TERATOLOGY STUDY OF ACRIBENZOLAR-S-METHYL IN RATS (STUDY NO. AN98025) (656/1197-98/116715) 6/26/98	870-3700
45105301	3 of 3	CGA-215944 AND CGA-245704 - MAGNITUDE OF THE RESIDUES IN OR ON CROP GROUP 9: CUCURBIT VEGETABLES (STUDY NO. 131-98) (656/131-98/115291) 12/14/99	860-1500

Company Official: Hubbard, Howard Lee _____
(Name) **(Signature)**

Company Name: NOVARTIS CROP PROTECTION, INC.

Company Contact: Hubbard, Howard Lee 336-632-7034
(Name) **(Phone)**

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300
www.cp.us.novartis.com

Tel 336 632 6000

NOVARTIS

FedEx

Lee Hubbard, Ph.D.
Senior Regulatory Manager
Regulatory Affairs
Tel 336-632-7034
Fax 336-292-6374
Internet Lee.Hubbard
@cp.novartis.com

451053-00

March 30, 2000

Document Processing Desk (Petition)
Office of Pesticide Programs-7505C
Ariel Rios Building
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Attention: Ms. Cynthia Giles-Parker, PM 22

Subject:	***CGA-245704 [Acibenzolar-S-methyl] (EPA Reg. No. 100- OER):*** Requesting Tolerances for CGA-245704 in/on the Raw Agriculture Commodities of the Cucurbit Vegetable Crop Groups and Registration of the Associated Labeling for Acibenzolar-S-methyl / Trifloxystrobin

Dear Ms. Giles-Parker:

With this tolerance petition submission, Novartis Crop Protection, Inc., officially requests the establishment of new tolerances for CGA-245704 (Acibenzolar-*S*-methyl – ISO proposed) on the raw agricultural commodities of the Cucurbit Vegetable Crop Group and the approval of the enclosed proposed labeling to allow applications of Acibenzolar-S-methyl / Trifloxystrobin to the Cucurbit Vegetable Crop Group.

On April 21, 1998, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the fruiting and leafy vegetables crop groups. On May 12, 1999, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the brassica (cole) vegetables crop group.

Novartis proposes to register use of CGA-245704 for control of powdery mildew, downy mildew and gummy stem blight in cucurbit crops in combination with and CGA-279202 (trifloxystrobin), a reduced-risk product which is currently registered for use on cucurbits (Flint™, EPA Reg. No. 100-919; 40 CFR 180.555). This proposed combination product is preferred over either product alone. CGA-245704, solo, only provides suppression of

downy mildew of cucurbits. The combination with CGA-279202 shows an additive response whereby good control of downy mildew is achieved. A broader spectrum of activity is also attained with the combination product when compared to the solo CGA-279202.

This submission includes a transmittal document and:

1. Three copies of the FQPA Tolerance Petition -- Sections 408(d)(2)(A)(i) to 408(d)(2)(A)(xiii),

2. Proposed labeling for Acibenzolar-*S*-methyl / Trifloxystrobin (5 copies each),

3. Completed Application for Registration (Form 8570-1) request forms for Acibenzolar-*S*-methyl / Trifloxystrobin.

4. Two volumes of data (3 copies each) supporting the requested tolerances,

5. A disk containing a draft Notice of Filing (Word Perfect).

A check in the amount of $15,550 has been forwarded to the EPA Accounting Office in Pittsburgh along with a copy of this letter to support consideration of this petition by the EPA.

Thank you for your consideration of an expedited review of this petition and labeling according the Reduced Risk Initiative. Please contact me if there are any questions associated with the petition or labeling.

Sincerely,

Lee Hubbard

cc: Luis Suguiyama, Fungicide Branch Chief (letter only)
Maria Rodriguez, Team 22 (letter only)
EPA Accounting Office; Pittsburgh, PA (letter only)

VOLUME 1 OF 3 OF SUBMISSION
(TRANSMITTAL DOCUMENT)

1. Name and Address of Submitter

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419

2. Regulatory Action in Support of which this Package is Submitted

ACIBENZOLAR-S-METHYL TECHNICAL
REQUESTING TOLERANCES IN THE CURCURBIT CROP GROUP

3. Transmittal Date

March 30, 2000

4. List of Submitted Studies

MRID NUMBER	VOLUME NUMBER	STUDY TITLE	EPA GUIDELINE NUMBER
	1 of 3	TRANSMITTAL DOCUMENT	NOT APPLICABLE
45089701	2 of 3	TERATOLOGY STUDY OF ACRIBENZOLAR-S-METHYL IN RATS (STUDY NO. AN98025) (656/1197-98/116715) 6/26/98	870-3700
45105301	3 of 3	CGA-215944 AND CGA-245704 - MAGNITUDE OF THE RESIDUES IN OR ON CROP GROUP 9: CUCURBIT VEGETABLES (STUDY NO. 131-98) (656/131-98/115291) 12/14/99	860-1500

Company Official: Hubbard, Howard Lee
(Name) (Signature)Company
Name: NOVARTIS CROP PROTECTION, INC.

Company Contact: Hubbard, Howard Lee 336-632-7034
(Name) (Phone)

Maria 01

Cynthia

This is an ACCEPTED submission.

One copy of the PPC diagnosis and one copy of the annotated bibliography are provided for your files. The PPC has already mailed out the submitter's copy of the two documents.

Rejected Studies need to be Corrected

This is a PARTIALLY ACCEPTED/COMPLETELY REJECTED submission.

A copy of the PPC diagnosis and the annotated bibliography are provided for your files. A second copy is provided for your use in corresponding with the data submitter.

Administrative

Materials

Rejected (03) Studies

Pages 223-225
have been incorporated
into the study (for
each copy.)

SMDR
4/27/2000

APR 20 2000

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs

NOVARTIS CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 274198300

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 03/31/00. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your data submittal was found to be partially in compliance with the standards for submission of data contained in PR Notice 86-5, with the exceptions noted below. A copy of your transmittal bibliography is enclosed, annotated with the Master Record ID's (MRIDs) assigned to each document accepted. Please use these numbers in all future references to these documents. If deficiencies were found which apply to individual accepted studies, they are listed below following the applicable MRID. Any document which has been assigned a MRID has been accepted under PR Notice 86-5. If any comments related to a MRID appear on this report, they are provided for your information and reference when preparing future submissions. Some individual documents were not acceptable, and all copies are being returned to you for correction for the reasons indicated below. These rejected studies have been assigned separate identification numbers which are annotated on both the enclosed bibliography and the rejected document labels. The rejected studies and their deficiencies are described below.

Rejected study [03] :

* Judging from the pagination of the study, pages 223-225 ...were omitted from the submitted copy.

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300
www.cp.us.novartis.com

Tel 336 632 6000

NOVARTIS

FedEx

Lee Hubbard, Ph.D.
Senior Regulatory Manager
Regulatory Affairs
Tel 336-632-7034
Fax 336-292-6374
Internet Lee.Hubbard
@cp.novartis.com

450897-00

March 30, 2000

Document Processing Desk (Petition)
Office of Pesticide Programs-7505C
Ariel Rios Building
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Attention: Ms. Cynthia Giles-Parker, PM 22

Subject: **CGA-245704 [Acibenzolar-*S*-methyl] (EPA Reg. No. 100- OER):** Requesting Tolerances for CGA-245704 in/on the Raw Agriculture Commodities of the Cucurbit Vegetable Crop Groups and Registration of the Associated Labeling for Acibenzolar-S-methyl / Trifloxystrobin

Dear Ms. Giles-Parker:

With this tolerance petition submission, Novartis Crop Protection, Inc., officially requests the establishment of new tolerances for CGA-245704 (Acibenzolar-*S*-methyl – ISO proposed) on the raw agricultural commodities of the Cucurbit Vegetable Crop Group and the approval of the enclosed proposed labeling to allow applications of Acibenzolar-S-methyl / Trifloxystrobin to the Cucurbit Vegetable Crop Group.

On April 21, 1998, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the fruiting and leafy vegetables crop groups. On May 12, 1999, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the brassica (cole) vegetables crop group.

Novartis proposes to register use of CGA-245704 for control of powdery mildew, downy mildew and gummy stem blight in cucurbit crops in combination with and CGA-279202 (trifloxystrobin), a reduced-risk product which is currently registered for use on cucurbits (Flint™, EPA Reg. No. 100-919; 40 CFR 180.555). This proposed combination product is preferred over either product alone. CGA-245704, solo, only provides suppression of

downy mildew of cucurbits. The combination with CGA-279202 shows an additive response whereby good control of downy mildew is achieved. A broader spectrum of activity is also attained with the combination product when compared to the solo CGA-279202.

This submission includes a transmittal document and:

1. Three copies of the FQPA Tolerance Petition -- Sections 408(d)(2)(A)(i) to 408(d)(2)(A)(xiii),

2. Proposed labeling for Acibenzolar-*S*-methyl / Trifloxystrobin (5 copies each),

3. Completed Application for Registration (Form 8570-1) request forms for Acibenzolar-*S*-methyl / Trifloxystrobin.

4. Two volumes of data (3 copies each) supporting the requested tolerances,

5. A disk containing a draft Notice of Filing (Word Perfect).

A check in the amount of $15,550 has been forwarded to the EPA Accounting Office in Pittsburgh along with a copy of this letter to support consideration of this petition by the EPA.

Thank you for your consideration of an expedited review of this petition and labeling according the Reduced Risk Initiative. Please contact me if there are any questions associated with the petition or labeling.

Sincerely,

Lee Hubbard

cc: Luis Suguiyama, Fungicide Branch Chief (letter only)
Maria Rodriguez, Team 22 (letter only)
EPA Accounting Office; Pittsburgh, PA (letter only)

VOLUME 1 OF 3 OF SUBMISSION
(TRANSMITTAL DOCUMENT)

1. Name and Address of Submitter

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419

2. Regulatory Action in Support of which this Package is Submitted

ACIBENZOLAR-S-METHYL TECHNICAL
REQUESTING TOLERANCES IN THE CURCURBIT CROP GROUP

3. Transmittal Date

March 30, 2000

4. List of Submitted Studies

MRID NUMBER	VOLUME NUMBER	STUDY TITLE	EPA GUIDELINE NUMBER
	1 of 3	TRANSMITTAL DOCUMENT	NOT APPLICABLE
45089701	2 of 3	TERATOLOGY STUDY OF ACRIBENZOLAR-S-METHYL IN RATS (STUDY NO. AN98025) (656/1197-98/116715) 6/26/98	870-3700
Reject (03)	3 of 3	CGA-215944 AND CGA-245704 - MAGNITUDE OF THE RESIDUES IN OR ON CROP GROUP 9: CUCURBIT VEGETABLES (STUDY NO. 131-98) (656/131-98/115291) 12/14/99	860-1500

Company Official: Hubbard, Howard Lee _____
(Name) **(Signature)**

Company Name: NOVARTIS CROP PROTECTION, INC.

Company Contact: Hubbard, Howard Lee 336-632-7034
(Name) **(Phone)**

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300
www.cp.us.novartis.com

Tel 336 632 6000

NOVARTIS

FedEx

Lee Hubbard, Ph.D.
Senior Regulatory Manager
Regulatory Affairs
Tel 336-632-7034
Fax 336-292-6374
Internet Lee.Hubbard
@cp.novartis.com

450897-00

March 30, 2000

Document Processing Desk (Petition)
Office of Pesticide Programs-7505C
Ariel Rios Building
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Attention: Ms. Cynthia Giles-Parker, PM 22

Subject: **CGA-245704 [Acibenzolar-*S*-methyl] (EPA Reg. No. 100- OER):** Requesting Tolerances for CGA-245704 in/on the Raw Agriculture Commodities of the Cucurbit Vegetable Crop Groups and Registration of the Associated Labeling for Acibenzolar-S-methyl / Trifloxystrobin

Dear Ms. Giles-Parker:

With this tolerance petition submission, Novartis Crop Protection, Inc., officially requests the establishment of new tolerances for CGA-245704 (Acibenzolar-*S*-methyl – ISO proposed) on the raw agricultural commodities of the Cucurbit Vegetable Crop Group and the approval of the enclosed proposed labeling to allow applications of Acibenzolar-S-methyl / Trifloxystrobin to the Cucurbit Vegetable Crop Group.

On April 21, 1998, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the fruiting and leafy vegetables crop groups. On May 12, 1999, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodites of the brassica (cole) vegetables crop group.

Novartis proposes to register use of CGA-245704 for control of powdery mildew, downy mildew and gummy stem blight in cucurbit crops in combination with and CGA-279202 (trifloxystrobin), a reduced-risk product which is currently registered for use on cucurbits (Flint™, EPA Reg. No. 100-919; 40 CFR 180.555). This proposed combination product is preferred over either product alone. CGA-245704, solo, only provides suppression of

downy mildew of cucurbits. The combination with CGA-279202 shows an additive response whereby good control of downy mildew is achieved. A broader spectrum of activity is also attained with the combination product when compared to the solo CGA-279202.

This submission includes a transmittal document and:

1. Three copies of the FQPA Tolerance Petition -- Sections 408(d)(2)(A)(i) to 408(d)(2)(A)(xiii),

2. Proposed labeling for Acibenzolar-*S*-methyl / Trifloxystrobin (5 copies each),

3. Completed Application for Registration (Form 8570-1) request forms for Acibenzolar-*S*-methyl / Trifloxystrobin.

4. Two volumes of data (3 copies each) supporting the requested tolerances,

5. A disk containing a draft Notice of Filing (Word Perfect).

A check in the amount of $15,550 has been forwarded to the EPA Accounting Office in Pittsburgh along with a copy of this letter to support consideration of this petition by the EPA.

Thank you for your consideration of an expedited review of this petition and labeling according the Reduced Risk Initiative. Please contact me if there are any questions associated with the petition or labeling.

Sincerely,

Lee Hubbard

cc: Luis Suguiyama, Fungicide Branch Chief (letter only)
Maria Rodriguez, Team 22 (letter only)
EPA Accounting Office; Pittsburgh, PA (letter only)

VOLUME 1 OF 3 OF SUBMISSION
(TRANSMITTAL DOCUMENT)

1. Name and Address of Submitter

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419

2. Regulatory Action in Support of which this Package is Submitted

ACIBENZOLAR-S-METHYL TECHNICAL
REQUESTING TOLERANCES IN THE CURCURBIT CROP GROUP

3. Transmittal Date

March 30, 2000

4. List of Submitted Studies

MRID NUMBER	VOLUME NUMBER	STUDY TITLE	EPA GUIDELINE NUMBER
	1 of 3	TRANSMITTAL DOCUMENT	NOT APPLICABLE
45089701	2 of 3	TERATOLOGY STUDY OF ACRIBENZOLAR-S-METHYL IN RATS (STUDY NO. AN98025) (656/1197-98/116715) 6/26/98	870-3700
Reject (03)	3 of 3	CGA-215944 AND CGA-245704 - MAGNITUDE OF THE RESIDUES IN OR ON CROP GROUP 9: CUCURBIT VEGETABLES (STUDY NO. 131-98) (656/131-98/115291) 12/14/99	860-1500

Company Official: Hubbard, Howard Lee _____
(Name) (Signature)Company
Name: NOVARTIS CROP PROTECTION, INC.

Company Contact: Hubbard, Howard Lee 336-632-7034
(Name) (Phone)

Acibenzolar-S-methyl + Trifloxystrobin 50WG
(CGA-245704 WG + CGA-279202 WG)

For protection against certain diseases of cucurbit vegetables.

Active Ingredient:	
Acibenzolar-S-methyl (CAS # 135158-54-2)	12.5%
Trifloxystrobin (CAS No. 141517-21-7)	37.5%
Other Ingredients:	50.0%
Total:	100.0%

A water-dispersible granule.

EPA Reg. 100-____

EPA Est. _____

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use on outer container.

U.S. Standard Measure

NCP

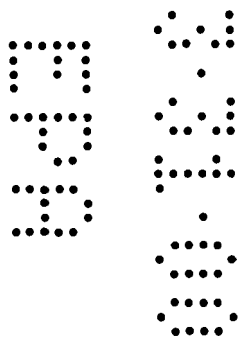
DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

Conditions of Sale and Warranty

The **Directions for Use** of this product reflect the opinion of experts based on laboratory and field trials. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of Novartis.



DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

Coveralls

Chemical-resistant gloves made of any waterproof material

Shoes plus socks

GENERAL INFORMATION

Acibenzolar-S-methyl + Trifloxystrobin WG is comprised of two modes of action. Acibenzolar-S-methyl, a systemic compound, is an inducer of host plant resistance. Acibenzolar-S-methyl exhibits an unique mode of action which mimics the natural systemic activated resistance (SAR) response found in most plant species. It has no direct activity against target pathogens.

Trifloxystrobin is a broad-spectrum fungicide for the control of certain diseases in pome fruits, grapes, and cucurbits. Trifloxystrobin works by interfering with respiration in plant pathogenic fungi. Trifloxystrobin is a potent inhibitor of spore germination and mycelial growth.

UNDER CERTAIN CONDITIONS CONDUCIVE TO EXTENDED INFECTION PERIODS, ADDITIONAL FUNGICIDE APPLICATIONS BEYOND THE NUMBER ALLOWED BY THIS LABEL MAY BE NEEDED. UNDER THESE CONDITIONS USE ANOTHER FUNGICIDE REGISTERED FOR THE CROP/DISEASE APPEARING ON THIS LABEL.

For best performance, always follow these directions:

- Acibenzolar-S-methyl + Trifloxystrobin WG should be applied to plant foliage preventively, before disease is observed in the field.
- Apply Acibenzolar-S-methyl + Trifloxystrobin WG in sufficient water to ensure uniform coverage.
- An Acibenzolar-S-methyl + Trifloxystrobin application mimics the SAR response in plants. Maximum disease control is normally obtained 4 days after an Acibenzolar-S-methyl + Trifloxystrobin application.

Resistance Management

Trifloxystrobin belongs to the strobilurin class of chemistry which exhibits no known cross-resistance to other chemical classes including sterol inhibitors, dicarboximides, benzimidazoles, aniLinopyrimidines, or phenylamides. Trifloxystrobin (active ingredient in Flint) does exhibit cross-resistance to other strobilurin fungicides such as azoxystrobin and kresoxim-methyl. Fungal pathogens are known to develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, the use of this product should conform to resistance management strategies established for the crop and use area. Such strategies may include rotating and/or tank-mixing with products having different modes of action; or limiting the total number of applications per season. Novartis encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label.

Acibenzolar-S-methyl exhibits a mode of action unique from currently available fungicides and bactericides. Since Acibenzolar-S-methyl has no direct activity on plant pathogens, the likelihood of pathogen development of insensitivity is low. However, plant pathogens are known to develop tolerance to host plant resistance and to products used repeatedly for control. Because insensitivity development cannot be fully predicted, the use of this product should conform to

sensitivity management strategies established for the crop and use area. Such strategies may include rotating and/or tank-mixing with products with different modes of action as well as the use of good cultural practices. Consult your local pest control advisor or extension office for details. If insensitivity to this product develops in your area, this product or other products with a similar mode of action may not provide adequate control. If you experience difficulty with control, and insensitivity is a likely cause, consult your local Novartis Crop Protection representative or pest control advisor for the best alternative method of control. Novartis encourages responsible product stewardship to ensure effective long-term disease control.

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.

Spray Equipment

Thorough coverage is necessary to provide maximum disease control. Applications using sufficient water volume to provide thorough and uniform coverage generally provide the most effective disease control.

To avoid spray drift, do not apply when conditions favor drift beyond the target area. Avoid spray overlap, as crop injury or illegal residues may occur.

Equip sprayers with nozzles that provide accurate and uniform application. Be certain that nozzles are the same size and uniformly spaced across the boom. Always calibrate sprayer before use.

Use a pump with capacity to: (1) maintain adequate psi at nozzles, and (2) provide sufficient agitation in the tank to keep mixture in uniform suspension - this requires recirculation of 10% of tank volume per minute. Use a jet agitator or liquid sparge tube for agitation. Do not air sparge.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on suction side of pump should be **16-mesh or coarser**. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at nozzles. Check nozzle manufacturer's recommendations.

For more information on spray equipment and calibration, consult sprayer equipment manufacturers and state recommendations. For specific local directions and spray schedules, consult the current state agricultural extension service recommendations.

Mixing Procedures

Prepare no more spray mixture than is needed for the immediate spray operation. Thoroughly clean spray equipment before using this product to prevent possible crop injury, mixing or nozzle clogging problems from spray tank contamination. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

Acibenzolar-S-methyl + Trifloxystrobin WG Alone: Add 1/2 of the required amount of water

to the mix tank. With the agitator running, add the Acibenzolar-S-methyl + Trifloxystrobin WG to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the Acibenzolar-S-methyl + Trifloxystrobin WG has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

Acibenzolar-S-methyl + Trifloxystrobin WG + Tank Mixtures: Acibenzolar-S-methyl + Trifloxystrobin WG is compatible with most insecticide and fungicide products. However, the physical compatibility of Acibenzolar-S-methyl + Trifloxystrobin WG with tank-mix partners should be tested before use. To determine the physical compatibility of Acibenzolar-S-methyl + Trifloxystrobin WG with other products, use a jar test described below.

Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be re-mixed readily, it is physically compatible. Once compatibility has been demonstrated, use the same procedure for adding required ingredients to the spray tank.

Add 1/2 of the required amount of water to the mix tank. Start the agitator running before adding any tank mix partners. In general tank mix partners should be added in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables) such as Acibenzolar-S-methyl + Trifloxystrobin WG, liquid flowables, liquids and emulsifiable concentrates. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all the mixture has been applied.

Note: When using Acibenzolar-S-methyl + Trifloxystrobin WG in tank mixtures, all products in water-soluble packaging, including Acibenzolar-S-methyl + Trifloxystrobin WG, should be added to the tank before any other tank mix partner, including Acibenzolar-S-methyl + Trifloxystrobin WG. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using Acibenzolar-S-methyl + Trifloxystrobin WG in a tank mixture, observe all directions for use, which appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

Chemigation: Do not apply this product through any type of irrigation system.

CUCURBIT VEGETABLES: CHAYOTE, CHINESE WAXGOURD, CITRON MELON, CUCUMBER, GHERKIN, EDIBLE GOURDS, MOMORDICA SPP., MUSKMELON, PUMPKIN, SUMMER SQUASH, WINTER SQUASH, WATERMELON

Disease Control	Rate oz/Acre	Application Timing	Notes
Powdery Mildew (*Sphaerotheca fuliginea*) (*Erysiphe cichoracearum*)	2.0	Begin applications preventively when conditions are favorable for disease and continue as needed on a 7 to 14-day interval.	Use the higher rates and shorter intervals when disease pressure is severe. Alternate with a sterol inhibitor fungicide.

	Rate oz./Acre	Application Timing	Notes
Gummy Stem Blight *(Didymella bryoniae)*	4.0	Begin applications preventively when conditions are favorable for disease. Alternate applications with Ridomil Gold®Bravo® at the labeled rate and continue as needed on a 7 to 14-day interval.	Use the shorter intervals when disease pressure is severe.

	Rate oz./Acre	Application Timing	Notes
Downy Mildew *(Pseudoperonospora cubensis)*	4.0	Begin applications preventively when conditions are favorable for disease. Alternate applications with Ridomil Gold®Bravo® at the labeled rate and continue as needed on a 7 to 14-day interval.	Use the shorter intervals when disease pressure is severe.

Restrictions: Do not apply more than 0.5 lb. a.i. of Acibenzolar-S-methyl + Trifloxystrobin WG per acre per crop. Acibenzolar-S-methyl + Trifloxystrobin WG may be applied up 14 days of harvest. Do not exceed more than four total applications of trifloxystrobin or other strobilurin fungicides per acre per crop. To limit the potential for resistance to develop, do not apply more than one application of trifloxystrobin or other strobilurin fungicides before alternating with a non-strobilurin fungicide.

Rotational Restrictions

Treated areas may be replanted immediately following harvest with any crop listed on this label. For crops not listed on this label, do not plant back within 30 days of last application.

Storage and Disposal

Store in a cool, dry place.

Pesticide Disposal

Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be used according to label instruction, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

Container Disposal

Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill, by incineration, or, if allowed by state and local authorities, by burning, If burned, stay out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup, procedures and disposal of wastes. In the event of a major spill, fire, or other emergency call 1-800-888-8372, day or night.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Causes *moderate* eye irritation. Harmful if absorbed through skin. Avoid contact with *eyes, skin, or clothing. Wash thoroughly with soap and water after handling.*

First Aid

If in eyes: *Flush eyes with plenty of water. Get medical attention if irritation persists.*

If on skin: Wash with plenty of soap and water. Get medical attention *if irritation persists.*

Note to Physician: If ingested, induce emesis or lavage stomach. Treat symptomatically.

Personal Protection Equipment
Applicators and other handlers must wear:

Long-sleeved shirt and long pants
Waterproof gloves
Shoes plus socks
Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR

170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

Do not apply to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Physical or Chemical Hazards

Do not use, pour, spill or store near heat or open flame.

Acibenzolar-S-methyl + Trifloxystrobin™ trademark of Novartis
U.S. Patent No. _____

Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419
NCP Product ID.

Back Page of Booklet

Acibenzolar-S-methyl + Trifloxystrobin 50WG
(CGA-245704 WG + CGA-279202 WG)

For protection against certain diseases of cucurbit vegetables.

Active Ingredient:	
Acibenzolar-S-methyl (CAS # 135158-54-2)	12.5%
Trifloxystrobin (CAS No. 141517-21-7)	37.5%
Other Ingredients:	50.0%
Total:	100.0%

A water-dispersible granule.

Acibenzolar-S-methyl + Trifloxystrobin WG is a water-dispersible granule.

See directions for use in attached booklet.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-

EPA Est.

Acibenzolar-S-methyl + Trifloxystrobin™ trademark of Novartis
U.S. Patent No. _____

10 oz.
U.S. Standard Measure

KEEP OUT OF REACH OF CHILDREN

CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes *moderate eye* irritation. Harmful if absorbed through skin. Avoid contact with *eyes, skin, or clothing. Wash thoroughly with soap and water after handling.*

Statement of Practical Treatment

If in the eyes: Flush eyes with *plenty of water. Get medical attention if irritation* persists.

If on skin: Wash with plenty of water. Get medical attention *if irritation persists.*

Note to Physician: If ingested, induce emesis or lavage stomach. Treat symptomatically.

Environmental Hazards

Do not apply directly to water, or to areas where surface water is present, or to inter-tidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate.

Physical or Chemical Hazards

Do not use, pour, spill, or store near heat or open flame.

For minor spills, leaks, etc., follow precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Storage

Store in a cool, dry place.

Chemigation

Do not apply this product through any time of irrigation system.

Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419
NCP

VOLUME 1 OF 1

TECHNICAL CGA-245704

EPA FILE SYMBOL 100-OER

PESTICIDE PETITION NUMBER _____

PETITION TO ESTABLISH TOLERANCES FOR ACIBENZOLAR-S-METHYL IN OR ON THE CUCURBIT VEGETABLES (CROP GROUP 9)

REQUESTING USE OF CGA-245704 (BENZO[1,2,3]THIADIAZOLE-7-CARBOTHIOIC ACID S-METHYL ESTER) FOR CONTROL OF DISEASES OF CUCURBIT VEGETABLES

DATE SUBMITTED: March 30, 2000

SUBMITTED BY
NOVARTIS CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 27419

TABLE OF CONTENTS

This Petition Was Prepared In Accordance With The Federal Food, Drug And Cosmetic Act, Section 408 (D) (2) (A) As Amended By The Food Quality Protection Act Of 1996

SECTION 408 (d)(2)(A):

SECTION 408 (d) (2)(A) (i)

SUMMARY OF THE PETITION AND THE DATA, INFORMATION AND ARGUMENTS SUBMITTED OR CITED IN SUPPORT

SUMMARY

CGA-245704 is a new biochemical disease protection tool, which acts by conferring a markedly enhanced physiological ability in plants to ward off or control disease. This physiological process is achieved by the triggering of systemic activated resistance (SAR) within plants. The common name for the active ingredient is acibenzolar-S-methyl (ISO proposed), a compound which belongs to a chemical class not currently registered for crop protection in the United States. Because of its unique mode of action, the International Standards Organization has created a new category for CGA-245704 called PLANT ACTIVATOR. CGA-245704 confers broad-spectrum control of plant diseases. Application rates range from 0.015 to 0.031 pound of active ingredient per acre per application. Tolerances in or on cucurbit vegetables are requested in this petition.

On April 21, 1998, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodities of the fruiting and leafy vegetable crop groups. Pesticide Petition Number **8F4974** was submitted on March 31, 1998, requesting tolerances for the leafy and fruiting vegetable crop groups.

On May 12, 1999, the Reduced-Risk Committee of the Office of Pesticide Programs categorized Acibenzolar-S-methyl as a reduced risk pesticide for proposed use on the raw agricultural commodities of the brassica leafy vegetables crop group and bananas. Pesticide Petition Number **9F6004** was submitted on May 7, 1999, requesting tolerances for the brassica leafy vegetables crop group and bananas.

An end-use product containing CGA-245704 (acibenzolar-S-methyl) in combination with CGA-279202 (trifloxystrobin) is proposed for control of certain diseases of cucurbit crops. The combination product is preferred over either product alone. CGA-245704, solo, only provides suppression of downy mildew of cucurbits. The combination with CGA-279202 shows an additive response whereby good control of downy mildew is achieved. A broader spectrum of activity is also attained with the combination product when compared to the solo CGA-279202 product. A tolerance has been established for trifloxystrobin in or on cucurbits (40 CFR 180.555).

The purpose of this petition is to establish tolerances for acibenzolar-S-methyl in cucurbit vegetables. Tolerances proposed in Section 408 (d) (2) (A) (vii) of this petition for acibenzolar-S-methyl include:

Cucurbit Vegetables (Crop Group 9)	**1.0 ppm**

JUSTIFICATION FOR TOLERANCES

A. Residue Chemistry

(1) Plant Metabolism: Novartis believes the metabolic profile of acibenzolar-S-methyl has been well characterized in lettuce, tomatoes, wheat, and rice. The metabolism in these crops proceeded via hydrolysis of benzo[1,2,3]thiadiazole-7-carbothioic acid S-methyl ester to benzo[1,2,3]thiadiazole-7-carboxylic acid (BTCA), followed by conjugation as ester, glycoside and/or other plant constituents. The metabolism profile supports the use of an analytical enforcement method that accounts for acibenzolar-S-methyl and metabolites containing the benzo[1,2,3]thiadiazole-7-carboxylic acid (BTCA) moiety.

(2) Analytical Method: Novartis Analytical Method AG-671A is a practical and valid method for the determination and confirmation of CGA-245704 in RAC and processing substrates from the tobacco, cucurbit vegetables crop group, leafy (including brassica) vegetables crop group, and fruiting vegetables crop group at a limit of quantitation (LOQ) of 0.02 ppm. The method involves extraction, solid phase cleanup of samples with analysis by HPLC with UV detection or confirmatory LC/MS. The validity is demonstrated by the acceptable accuracy and precision obtained on numerous procedural recovery samples (radiovalidation and field trial sample sets), and by the extractability and accountability obtained by the analysis of weathered radioactive substrates using Analytical Method AG-671A.

(3) U.S. FDA Multiresidue Methods: The FDA standard multiresidue methods are applicable for the determination of acibenzolar-S-methyl and BTCA.

(4) Magnitude of Residue: This petition is supported by nineteen field trials conducted on on representative members of the Cucurbit Vegetables Crop Group. Cucurbit crop samples were analyzed for by the total residue method AG-671A to determine the combined residues of acibenzolar-S-methyl and metabolites which contain the benzo[1,2,3]thiadiazole-7-carboxylic acid (BTCA) moiety.

In cucurbit vegetables with 0-day PHI, the maximum residues found in/on cantaloupes, cucumbers, and summer squash were 0.95 ppm, 0.43 ppm, and 0.18 ppm,, respectively. A tolerance of 1.0 ppm for the cucurbit vegetables crop group has been requested. A tolerance of 1.0 ppm in cucurbit vegetables has been requested.

B. Toxicological Profile

(1) Acute Toxicity: The risk from acute dietary exposure to acibenzolar-S-methyl is considered to be very low. CGA-245704 has low orders of acute toxicity by the oral, dermal and inhalation exposure routes. Results from acute studies all fall within toxicity rating categories of III or IV. CGA-245704 technical has a low order of acute toxicity, is only slightly irritating to skin and eyes, but may cause sensitization by skin contact. An LD_{50} of greater than 5000 mg/kg was observed for the acute oral toxicity study in rats. The maternal toxicity NOAEL is 200 mg/kg/day. The LOAEL based on a developmental toxicity study is 10 mg/kg/day. The acute RfD is 0.033 mg/kg/day according to a report of the Hazard Identification Assessment Review Committee (12/9/99).

Study	Acibenzolar-S-Methyl
Rat acute oral study	LD_{50} >5,000 mg/kg (IV)
Rat acute dermal study	LD_{50} >2,000 mg/kg (III)
Rat inhalation study	LC_{50} >5,000 mg/m^3 (IV)
Rabbit primary eye irritation study	minimally irritating (III)
Rabbit primary dermal irritation	slightly irritating. (IV)
Guinea pig skin sensitization study	sensitizer

(2) Genotoxicity: CGA-245704 technical was not mutagenic or clastogenic and did not provoke unscheduled DNA synthesis when tested thoroughly in a battery of standard in vivo and in vitro independent assays, using both eukaryotes and prokaryotes, and with or without metabolic activation.

Study of Acibenzolar-S-Methyl	Findings
Salmonella/E. Coli point mutation test	Negative
Chinese hamster V79 cell test	Negative
Rat hepatocyte DNA repair test	Negative
Chinese hamster ovary cell tests	Negative.
Chinese hamster bone marrow chromosome aberration test	Negative

(3) Reproductive and Developmental Toxicology: Acibenzolar-S-methyl is not a teratogenic hazard except close to the maximum tolerated dose. In the rat multigeneration study, CGA-245704 (acibenzolar-S-methyl) technical had no effect on rat reproductive parameters including gonadal function, estrus cycles, mating behavior, conception, parturition, lactation, weaning, and sex organ histopathology. At 4000 ppm, parental body weights were reduced.

Acibenzolar-S-Methyl Study	Findings
Rat oral teratology	Maternal NOAEL of 200 mg/kg; LOAEL, 400 mg/kg based on embryotoxicity and teratogenic effects Fetal LOAEL of 10 mg/kg. BMD 166 mg/kg for dams and fetuses.
Rabbit oral teratology study	Maternal NOEL of 50 mg/kg based on maternal toxicity and slightly delayed ossification. Fetal NOEL of 300 mg/kg based on changes in body weight
Rat 2-generation reproduction study	NOEL of 25 mg/kg based on weight development in adults at 4000 ppm and pups during lactation at 2000 ppm and above. No adverse effects on reproduction or fertility.

(4) Subchronic Toxicology: No signs of neurotoxicity were noted with CGA-245704 in both acute and subchronic studies even at the highest dose levels of 800 mg/kg and 8,000 ppm, respectively. The evaluated parameters included functional observation battery, motor activity measurement and neurohistopathologic assessment.

Acibenzolar-S-Methyl Study	Findings
Rat 28-day dermal study	NOEL of 1,000 mg/kg/day
Dog 90-day feeding study	NOEL of 10 mg based on reduced body weight gain at 50 mg/kg/day
Mouse 90-day feeding	NOEL of <30 mg/kg based on reduced body weight development at 1000 ppm and above
Rat 90-day feeding study	NOEL of 25 mg/kg based on inappetance and reduced body weight development at higher dose levels (4000 and 8000 ppm)

(5) Chronic Toxicity: The chronic reference dose (RfD) for acibenzolar-S-methyl is 0.11 mg/kg/day. The chronic RfD for Females (13-50 years) is 0.033 mg/kg/day according to a December 9, 1999 Report of Hazard Identification Assessment Review Committee. Acibenzolar-S-methyl is not oncogenic in rats or mice and is not likely to be carcinogenic in humans. No carcinogenic activity was detected in mice and rats at the Maximum Tolerated Dose (MTD). Using the Guidelines for Carcinogenic Risk Assessment published September 24, 1986 (51 FR 33992), Novartis believes acibenzolar-S-methyl to be in Group "E" (no evidence of carcinogenicity). There was no evidence of carcinogenicity in an 18-month feeding study in mice and a 24-month feeding study in rats. Dosage levels in both the mouse and the rat studies were adequate for identifying a cancer risk. Novartis believes acibenzolar-S-methyl should be classified as a "Not Likely" carcinogen based on the lack of carcinogenicity in rats and mice.

Acibenzolar-S-Methyl Study	Findings
Dog 12-month feeding study	NOEL of 5 mg/kg based on reduced body weight gain and hypochromic anemia. The MTD was 200 mg/kg
Mouse 18-month feeding study	NOEL of 10.8 mg/kg. The MTD was 6000 ppm based on body weight changes and no evidence of oncogenicity was seen.
Rat 24-month chronic feeding study	NOEL of 7.77 mg/kg based on hematologic and histologic findings. The MTD was 7500 ppm based on spleen histopathology and no evidence of oncogenicity was seen.

(6) Animal Metabolism: Metabolism proceeded primarily via hydrolysis to form the corresponding carboxylic acid (BTCA) which was subsequently conjugated with several amino acids including glycine, lysine and ornithine. Elimination was rapid in all cases. Oxidation of the aromatic ring of the acid was a very minor pathway observed in goats. The metabolic fate of CGA-245704 in plants paralleled that observed in animals. The major metabolite in all test systems was the same hydrolysis product BTCA. Thus, the metabolism profile supports the use of an analytical enforcement method that accounts principally for parent and BTCA.

(7) Metabolite Toxicology: In short-term toxicity studies in rats, CGA-210007 was found to be of, at most, equal or less toxicity than the parent compound. As with parent CGA-245704, the subchronic NOEL for CGA-210007 was 100 mg/kg bw.

(8) Endocrine Effects: Acibenzolar-S-methyl does not belong to a class of chemicals known or suspected of having adverse effects on the endocrine system. Developmental toxicity studies in

rats and rabbits and a reproduction study in rats gave no indication that acibenzolar-S-methyl might have any effects on endocrine function related to development and reproduction. Acibenzolar-S-methyl is not a teratogenic hazard except close to the maximum tolerated dose. The chronic studies also showed no evidence of a long-term effect related to the endocrine system.

C. Aggregate Exposure

(1)(i) Dietary Exposure: Maximum expected chronic exposure to CGA-245704 in the diets of the most sensitive sub-population, females (13-50 years), was calculated to be 0.7% of the RfD. For the U.S. population (48 states) chronic exposure was 0.3% of the RfD. Maximum expected acute exposure to the most sensitive sub-population, females (13-50 years), was 47.9% of the aRfD. Acute exposure to the U.S. population was 1.2% of the aRfD. Dietary exposure analyses for CGA-245704 (and CGA-210007) were conducted using anticipated residues generated from field trials conducted at the maximum use rate and minimum pre-harvest interval (PHI). Quantities of two phenyl-hydroxylated metabolites were also included in the assessment.

(1)(ii) Drinking Water Exposure: Acibenzolar-S-methyl is rapidly degraded in the environment via photolysis and microbial degradation; aqueous and soil photolysis irradiated half lives for acibenzolar-S-methyl are 0.6 hours and 24 hours, respectively. The aerobic metabolism half-life is 0.22 DAYS. Anaerobic aquatic metabolism half-lives are 4 days and 96 days for primary and secondary half-life, respectively. The leaching potential for acibenzolar-S-methyl is low (K_{oc} = 492-3288). Dietary exposure to acibenzolar-S-methyl from water intake for the most sensitive subpopulation of children (1-6 years old), was calculated to be <0.01% of the RfD, based on the GENEEC model. Based on these data, Novartis does not anticipate exposure to residue of acibenzolar-S-methyl in drinking water.

(2) Non-dietary Exposure: Novartis believes that the potential for non-occupational exposure to the general public is unlikely except for potential residues in food crops discussed above. The proposed uses for acibenzolar-S-methyl are for agricultural crops and the product is not used residentially in or around the home.

D. Cumulative Effects

Novartis believes that consideration of a common mechanism of toxicity is not appropriate at this time since there is no information to indicate that toxic effects produced by acibenzolar-S-methyl would be cumulative with those of any other chemicals. Acibenzolar-S-methyl is a plant activator and no other compounds in this class are registered in the United States. Consequently, Novartis is considering only the potential exposure to acibenzolar-S-methyl in its Aggregate risk assessment.

E Safety Determination

Dietary Risk Exposure Assessment: Acute and chronic dietary exposure analyses for CGA-245704 (analyzed as CGA-210007) were conducted using anticipated residues generated from field trials conducted at the maximum use rate and minimum pre-harvest interval (PHI). Quantities of the two phenyl-hydroxylated metabolites, CGA-323060 and CGA-324041, were also included in the assessment and were estimated from 14C-metabolism studies.

Acute Exposure: Acute exposure was calculated by Monte Carlo simulation using the entire distribution of field trial residues for all pending uses of acibenzolar-s-methyl including cucurbits. Residue values were generated from field trials conducted at the maximum application rate and

minimum pre-harvest interval. The assessment included parent (CGA-245704) analyzed as the corresponding acid metabolite (CGA-210007). The two hydroxylation products of CGA-210007 (CGA-323060 and CGA-324041) were also included in the assessment and were estimated from metabolism studies conducted with lettuce and tomatoes. Projected percent of crop treated values were utilized to adjust the residue distributions for all commodities. For residues below the method limit of quantitation (LOQ), one-half LOQ was assumed. Exposure for females (13- 50 years old) was calculated to be 14.9% of the acute RfD.

Chronic Exposure: Chronic exposure was calculated by taking the mean of field trial residue values for all acibenzolar-s-methyl uses (including cucurbits). Residue values were generated from field trials conducted at the maximum application rate and minimum pre-harvest interval. Each mean residue value represented parent acibenzolar-s-methyl as the acid metabolite (CGA-210007). The assessment also included the two hydroxylation products of CGA-210007 (CGA-323060 and CGA-324041) and were estimated from metabolism studies conducted with lettuce and tomatoes. Projected market share values were used to adjust the mean field trial values for all commodities. All residues below the method limit of quantitation (LOQ) were assumed as one-half the LOQ for determining the mean residue values. In the chronic assessment conducted with a RfD based on a chronic NOEL from an 18-month carcinogenicity study in mice, exposure for all populations was less than one percent of the chronic RfD. As requested by HIARC, chronic exposure for females (13 – 50 years) was compared to a RfD based on a LOAEL from a developmental toxicity study in rats and a 300x uncertainty factor. Chronic exposure to females was 0.2% of the RfD when compared to this endpoint.

Updated projected market share values were used to adjust for percent of crop treated for all commodities. Per an EPA report (memo on Acibenzolar-S-Methyl: Report of the FQPA Safety Committee dated 12/20/99), an acute dietary assessment was made for females (13-50 years) comparing exposure to a lowest-observable adverse effect level (LOAEL) from a developmental toxicity study in rats and a 1000X uncertainty factor (RfD = 0.01 mg/kg/day). This assessment was performed and the female subpopulation (13-50 years) was found to have an exposure of 49.7% of the RfD cited above. The Hazard Identification Assessment Review Committee (HIARC; 12/9/99) determined that an acute exposure assessment was not necessary for the general population, infants and children. The same toxicological endpoint was also cited as the basis with which to compare chronic exposure for females (13-50 years). Chronic exposure to females (13-50 years) was found to be 0.7% of the RfD. For chronic exposure to the general population (including infants and children), a no-observable adverse effect level (NOAEL) from an 18-month carcinogenicity study in mice with a 100X uncertainty factor was cited as the toxicological endpoint. (RfD = 0.1 mg/kg/day). Chronic exposure to the U.S. population (and all other populations except nursing infants) was 0.3% of the chronic RfD. Nursing infants had zero exposure. The chronic and acute exposure results for the populations are provided below:

Acibenzolar-S-Methyl

Tier 3 Dietary Exposure Results for the U.S. Population (Chronic) and Females (13 – 50 Years)

Populations	Acute Exposure 99.9th Percentile (% aRfD) aRfD = 0.033 mg/kg	Chronic Exposure (%RfD) RfD = 0.033 mg/kg/day	Chronic Exposure (%RfD) RfD = 0.011 mg/kg/day[1]
U.S. Population	NA[2]	NA	0.3
All Infants (<1 Yr.)	NA	NA	0.3
Nursing Infants (<1 Yr.)	NA	NA	0.0
Non-Nursing Infants(<1Yr.)	NA	NA	0.3
Children (1-6 Yr.)	NA	NA	0.3
Children (7-12 Yr.)	NA	NA	0.3
Females (13-50 Yr.)	49.7	0.3	NA

[1] All chronic exposures for all populations were at 0.1% of the RfD with the exception of nursing infants with zero exposure.

[2] Acute exposure assessment not required (HIARC; 12/9/99)

Dietary exposure analyses for CGA-245704 (as CGA-210007) were constructed using anticipated residues generated from field trials conducted at the maximum use rate and minimum pre-harvest interval (PHI). The hydroxylation products of CGA-210007 (CGA-323060 and CGA-324041) were also included in this assessment and were estimated from 14C-metabolism data. All residue values below the method limit of quantitation (LOQ) were entered into the exposure software as ½ LOQ. Because residue values for all crops were not available, surrogation was performed and in the translation, crop grouping, agricultural practices, and morphology were considered. Below are the crops with available data used to surrogate commodities with no available data.

- Spinach: parsley, endive, cress, chicory, dandelion greens
- Celery: rhubarb
- Leaf lettuce: Swiss chard, all types of lettuce
- Broccoli: cauliflower, kohlrabi
- Cabbage: brussels sprouts
- Mustard greens: kale, savoy cabbage, collards
- Cucumbers: bitter melons, christophines, Chinese okra, winter melons, pumpkins
- Cantaloupe: casabas, crenshaws, honeydew melons, Persian melons, watermelons
- Summer squash was used as a surrogate for Spaghetti squash, and winter squash.
- Bell pepper residues were used for eggplants, sweet peppers, and pimentos.
- Hot peppers were used as a surrogate for paprika, and chili peppers.

In order to estimate the amount of the hydroxylated metabolites, CGA-323060 and CGA-324041, the ratio of hydroxylated metabolite to acid (CGA-210007) observed in 14C-metabolism studies with lettuce and tomatoes were used to estimate CGA-323060 and CGA-324041 in the leafy, cole, and cucurbit crop groups, as well as bananas. Lettuce had significantly greater quantities of CGA-323060 and CGA-324041 as compared to tomatoes. Both hydroxylated metabolites were present in leaf lettuce and together constituted approximately 40% of the total radioactivity. In contrast, only a minor amount of CGA-323060 was observed in tomatoes (2.5% of the total radioactivity). These results are consistent with the total amount of residue converted to CGA-210007 during validation of draft analytical method AG-671. In the validation experiment, accountability of residues converted to CGA-210007 was greater in tomatoes (71%) than in lettuce (33%). The amount of parent and CGA-210007 in 14C-CGA-245704-treated tomatoes harvested one week after the fourth application was 66% of the total radioactivity and this observation agrees well with the accountability results in the validation experiment. In contrast, 14C-CGA-245704-treated lettuce contained 42% of the total radioactivity as parent (17%) and CGA-210007 (25%). The amount of CGA-323060 and CGA-324041 estimated from the metabolism study in lettuce was used as a

surrogate for the amount of hydroxylated residues in leafy vegetables and cole crops. The amount of CGA-323060 and CGA-324041 in 14C-CGA-245704-treated tomatoes was used to estimate these hydroxylated residues in fruiting vegetables, cucurbits and bananas.

Projected market share values were applied to all commodities to adjust for the percent crop treated.

Projected Market Share Values for CGA-245704

Commodity	Acreage (base acres grown)	Projected Market Shares
Leafy Vegetables	259,090	15%
Fruiting Vegetables	500,712	10%
Brassica (Cole Crops)	229,287	10%
Bananas	733,590	70%
Cucurbits	487,000	4%

Exposure to residues of CGA-245704 and CGA-210007 in consumed food is minimal. Both chronic and acute exposure estimates demonstrate the use of CGA-245704 on crops results in more than a reasonable certainty of no harm. The results herein are conservative since field trial residues utilized in these assessments were generated under maximum label use rates and minimum pre-harvest intervals.

Sources of Exposure/Risk - Drinking Water: The potential for exposure to CGA-245704 through drinking water (surface or groundwater) is slight due to the minimal level of this chemical anticipated to reach these bodies of water. This expectation is based on the rapid degradation of CGA-245704 and the recommended low use rates that will further restrict the amount of chemical available for leaching or run-off.

Estimated Environmental Concentrations (EECs) for human health risk assessment are calculated using GENEEC (surface water) and SCIGROW (ground water) using the maximum application rate of 0.31 pounds active ingredient x 6 applications per year. The resulting ground water screening concentration is negligible.

Occupational and dietary exposures associated with the use of CGA-245704 will not lead to the uptake of toxicologically relevant doses of CGA-245704. Based on this assessment, it is concluded that CGA-245704 will not cause any adverse health effects under the proposed conditions of use.

F International Tolerances

Codex: Codex maximum residue levels (MRL's) have not been established for residues of CGA-245704 in or on raw Agricultural commodities from the fruiting vegetable and leafy vegetable crop groups. CGA-245704 has a MRL of 0.1 ppm on wheat in Switzerland and Hungary. Proposed European Union MRLs of 1.0 ppm on tomatoes and 0.1 ppm on bananas, cereals, wheat, spring barley and rice are pending. BION® (Acibenzolar-S-methyl) is a plant tonic in Germany (not as a conventional pesticide) and as such can be used on all crops; Novartis recommends use on cereal grains in Germany. MRLs of 1.0 ppm on tomatoes and 0.1 ppm on bananas, cereals, wheat, spring barley, and rice have been registered in Japan.

SECTION 408 (d) (2)(A) (i) (II)

Novartis Crop Protection, Inc. hereby agrees that the information presented in Section 408(d)(2)(A)(i)(I) may be published in part or in whole as a part of the notice of filing of this petition to be published under Section 408(d)(2)(A) and as part of any proposed or final regulation issued under same.

SECTION 408 (d) (2)(A) (ii)

NAME, CHEMICAL IDENTITY, AND COMPOSITION OF THE PESTICIDE CHEMICAL RESIDUE AND OF THE PESTICIDE CHEMICAL THAT PRODUCES THE RESIDUE

DEVELOPMENTAL NAME: CGA-245704

COMMON NAME: ACIBENZOLAR-S-METHYL (ISO PROPOSED)

CAS NUMBER: 135158-54-2

CHEMICAL NAME: Benzo (1,2,3) thiadiazole-7-carbothioic acid-S-methyl ester (IUPAC)

40 CFR SECTION: To be established

The composition of the aforementioned chemical and all related product chemistry data requirements are hereby cited below. The chemical composition of the pesticide chemical residue and the pesticide chemical are the same.

ACIBENZOLAR-S-METHYL: General Chemistry data for CGA 245704 Technical / Acibenzolar-S-methyl Technical (EPA File Symbol 100-OER) were previously submitted.

MRID #	STUDY TITLE	GUIDELINE #
44537001	CGA-245704 Technical Product Chemistry (Study No. 615-95)(379/615-95/78354)	830-6313, 830-6317 830-6320
44537002	Actigard (A-9180A) (Referred To In Attached Report As CGA-245704 50WG) Product Chemistry (Study No. 98-96)(379/98-96/78355)	830-6317 830-6320
44537003	CGA-245704 TECHNICAL PRODUCT CHEMISTRY GROUP A DATA REQUIREMENTS (STUDY NO. 263-98)(370/263-98/78356)	830-1550, 830-1600, 830-1620 830-1670, 830-1700, 830-1750 830-1800

SECTION 408 (d) (2)(A) (ii) (continued)

ACIBENZOLAR-S-METHYL: General Chemistry data for CGA- 245704 Technical / Acibenzolar-S-methyl Technical (EPA File Symbol 100-OER) were **previously submitted**.

MRID #	STUDY TITLE	GUIDELINE #
44014201	Technical CGA-245704: Product Chemistry (PC-96-003)(10452/182)	061-1, 061-2, 061-3
44014202	Actigard™ 50WG: Product Chemistry (PC-96-036)(10453/182)	061-1, 061-2, 061-3, 062-2, 062-3, 063, 063-2, 063-3, 063-4, 063-7, 063-12, 063-14, 063-15, 063-16, 063-17, 063-18 063-19, 063-20, 063-21
44014203	Technical CGA-245704: Product Chemistry (PC-96-003)(10448/182)	061-1, 061-2, 061-3
44014204	Technical CGA-245704: Product Chemistry (PC-96-003)(10450/182)	063-2, 063-3, 063-4, 063-6, 063-7, 063-9, 063-10, 063-11, 063-12, 063-13, 063-14, 063-15, 063-16, 063-17, 063-18 063-19, 063-20, 063-21
44014205	Summary of the Physical and Chemical Properties of CGA-245704 Technical and 50WG Test Substances (10449/182)	Not Applicable
44014206	CGA 245704 Technical And CGA 245704 50WG Characterization Of CGA 245704 Technical (10451/182)	Not Applicable

See Appendices 1 & 2 for summaries of product chemistry submitted with the EUP petition (May 3, 1996)

SECTION 408(d)(2)(A)(iii)

AMOUNT, TIMING, AND FREQUENCY OF APPLICATION OF THE PESTICIDE CHEMICAL ACIBENZOLAR-S-METHYL TO **CUCURBIT VEGETABLES.**

FORMULATION: **Acibenzolar-S-methyl (12.5%) + Trifloxystrobin (37.5%) 50WG**

USE DIRECTIONS FOR SPECIFIC CROPS

The end use product, Acibenzolar-S-methyl + Trifloxystrobin WG, incorporates two modes of action. Acibenzolar-S-methyl, a systemic compound, is an inducer of host plant resistance. Trifloxystrobin is a broad-spectrum fungicide for the control of certain diseases in pome fruits, grapes, and cucurbits. Trifloxystrobin works by interfering with respiration in plant pathogenic fungi. Trifloxystrobin is a potent inhibitor of spore germination and mycelial growth.

CUCURBIT VEGETABLES: Chayote, Chinese Waxgourd, Citron Melon, Cucumber, Gherkin, Edible Gourds, Momordica Spp., Muskmelon, Pumpkin, Summer Squash, Winter Squash, Watermelon

Disease Control	Rate oz/Acre	Application Timing	Notes
Powdery Mildew (*Sphaerotheca fuliginea*) (*Erysiphe cichoracearum*)	2.0	Begin applications preventively when conditions are favorable for disease and continue as needed on a 7 to 14- day interval.	Use the higher rates and shorter intervals when disease pressure is severe. Alternate with a sterol inhibitor fungicide.
Gummy Stem Blight *(Didymella bryoniae)*	4.0	Begin applications preventively when conditions are favorable for disease. Alternate applications with Ridomil Gold®Bravo® at the labeled rate and continue as needed on a 7 to 14-day interval.	Use the shorter intervals when disease pressure is severe.
Downy Mildew *(Pseudoperonospora cubensis)*	4.0	Begin applications preventively when conditions are favorable for disease. Alternate applications with Ridomil Gold®Bravo® at the labeled rate and continue as needed on a 7 to 14-day interval.	Use the shorter intervals when disease pressure is severe.

Restrictions: Do not apply more than 0.5 lb. a.i. of Acibenzolar-S-methyl + Trifloxystrobin WG per acre per crop. Acibenzolar-S-methyl + Trifloxystrobin WG may be applied up 14 days of harvest. Do not exceed more than four total applications of trifloxystrobin or other strobilurin fungicides per acre per crop. To limit the potential for resistance to develop, do not apply more than one application of trifloxystrobin or other strobilurin fungicides before alternating with a non-strobilurin fungicide.

Rotational Restrictions

Treated Areas may be replanted immediately following harvest with any crop on this label. For crops not listed on this label, do not plant back within 30 days of last application.

SECTION 408(d)(2)(A)(iv)

FULL REPORTS OF TESTS AND INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL, INCLUDING FULL INFORMATION AS TO THE METHODS AND CONTROLS USED IN CONDUCTING THOSE TESTS AND INVESTIGATIONS

CGA 245704 Technical: Additional data submitted with the March 31, 1998 and May 7, 1999 submissions include:

MRID #	STUDY TITLE	GUIDELINE #
44537021	NOA-419191 Technical (By-Product Of CGA-245704) Acute Oral Toxicity In The Rat (Limit Test) (Study No. 973096)(379/323-98)	081-1
44537022	CGA-362020 Technical (Isomer Of CGA-245704) Acute Oral Toxicity In The Rat (Limit Test) (Study No. 973078) (379/326-98)	081-1
44537023	CGA-323060 Technical (Plant Metabolite Of CGA-245704) Acute Oral Toxicity In The Rat (Limit Test) (STUDY NO. 963124)(379/496-96)	081-1
44537024	NOA-419191 Technical (By-Product Of CGA-245704) Salmonella And Escherichia/ Mammalian-Microsome Mutagenicity Test (Study NO.973097) (379/324-98)	084-2A
44537025	CGA-362020 Technical (Isomer Of CGA-245704) Salmonella And Escherichia/ Mammalian-Microsome Mutagenicity TEST (Study No.973079) (379/325-98)	084-2A
44537026	CGA-362020 Technical (Plant Metabolite Of CGA-245704) Salmonella And Escherichia/ Mammalian-Microsome Mutagenicity Test (Study No.963125) (379/761-97)	084-2A
44537027	CGA-245704 Technical: Bmd Analysis Of CGA-245704 Using Developmental Toxicity Studies In Rats (Study No. NA) (379/497-96)	NOT APPLICABLE

SECTION 408(d)(2)(A)(iv) -- CONTINUED

FULL REPORTS OF TESTS AND INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL, INCLUDING FULL INFORMATION AS TO THE METHODS AND CONTROLS USED IN CONDUCTING THOSE TESTS AND INVESTIGATIONS

CGA 245704 Technical: Data previously submitted:

MRID #	STUDY TITLE	GUIDELINE #
44014214	Acute Oral Toxicity Study Of CGA-245704 Technical In Rats (543-95)	081-1
44014216	Acute Dermal Toxicity In The Rats (575-93)	081-2
44014219	Acute Inhalation Toxicity In The Rat (576-93)	081-3
44014220	Primary Eye Irritation Study Of CGA-245704 Technical In Rabbits (544-95)	081-4
44014222	Primary Dermal Irritation Study Of CGA-245704 Technical In Rabbits (545-95)	081-5
44014225	CGA-245704 Technical: Skin Sensitization Test In The Guinea Pig (577-93)	081-6
44014227	CGA-245704 Technical: 28-Day Range Finding Study In Rats (Administration In Food) (482-92)	082-1A
44014228	CGA-245704 Technical: 3-Month Range Finding Toxicity Study In Mice (Administration In Food) (483-92)	082-1A
44014229	CGA-245704 Technicall 28-Days Oral Cumulative Toxicity Study In Rats (Gavage) (587-93)	082-1A
44014230	3-Month Oral Toxicity Study In Rats (Administration In Food) (484-92)	082-1A
44014231	28-Day Range Findidng Study In Beagle Dogs (579-93)	082-1B
44014232	90-Day Subchronic Oral Toxicity Study In BeAGle Dogs (588-93)	082-1B
44014233	28-Day Repeated Dose Dermal Toxicity Study In The Rat (589-93)	082-2
44014234	12-Month Chronic Oral Toxicity Study In Beagle Dogs (477-94)	083-1B
44014235	18-Month Oncogenicity Study In Mice (590-93)	083-2B
44014236	Rat Oral Teratogenicity (578-93)	083-3A
44014237	Rabbit Oral Teratogenicity (581-93)	083-3
44014238	Range Finding Rat Oral Teratogenicity (476-94)	083-3A
44014239	Range Finding Rat Oral Teratogenicity (474-94)	083-3A

SECTION 408(d)(2)(A)(iv) -- CONTINUED

FULL REPORTS OF TESTS AND INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL, INCLUDING FULL INFORMATION AS TO THE METHODS AND CONTROLS USED IN CONDUCTING THOSE TESTS AND INVESTIGATIONS

CGA 245704 Technical: Data previously submitted (continued):

MRID #	STUDY TITLE	GUIDELINE #
44014240	Rat Dermal Teratogenicity (475-94)	083-3A
44014241	CGA-245704 Technical: Two-Generation Reproduction Study (580-93) - 4 volumes	083-4
44014242	CGA-245704Comments on Reproduction Function Studies (10658/182)	Not Applicable
44014243	24-Month Carcinogenicity And Chronic Toxicity Study In Rats (591-93) 4 volumes	083-2A
44014244	Micronucleus Test Mouse (OECD Conform) (586-93)	084-2A
44014245	CGA 245704 Technical: Cytogenetic Test On Chinese Hamster Cells In Vitro (EC-Conform) (Study No. 923142)(584-93/182)	084-2
44014246	CGA 245704 Technical: Gene Mutation Test With Chinese Hamster Cells V79 In Vitro (Study No. 923141)(583-93/182)	084-2
44014247	Salmonella And Escherichia/Liver Microsome Test (585-93)	084-4
44014248	Autoradiographic Dna Repair Test On Rat Hepatocytes (OECD Conform) (582-93)	084-2A, 084-4
44014249	CGA 245704 Plant Activator Toxicological Profile And Exposure Assessment (Study No. NA)(10456/182)	Not Applicable
44014250	The Metabolism Of [U-14C] Phenyl CGA 245704 In The Rat (Study No 13/94)(10447/182)	085-1
44828002	Analytical method for the determination of cyromazine and its metabolite melamine resiudes in crops by gas chromatography with a nitrogen/phosphorus detector in the nitrogen specific mode (study no. AG-621) (457/3722) 1/12/95	860-1340
44828003	Determination of total residues of CGA-245704 as CGA-210007 by high performance liquid chromatography (HPLC) rem 172.02 (study no. 814-99) (457/814-99/105816) 12/6/93	860-1500
44828004	Determination of total residues of CGA-245704 determined as CGA-210007 in bananas (pulp and peel) - field trial 2181/95 (study no. 2181-96) (457/811-99/105814) 3/9/96	860-1500
44828005	Determination of total residues of CGA-245704 determined as CGA-210007 in bananas (pulp and peel) - field trial 2187-95 (study no. 2187-95) (457/813-99/106094) 3/22/96	860-1500
44890801	Determination of total residues of CGA-245704 as CGA-210007 by high performance liquid chromatography - rem 172.11 (study no. 172-11) (457/815-99/106969) 10/20/95	860-1500
44828006	Determination of total residues of CGA-245704 determined as CGA-210007 in bananas (pulp and peel) - field trial 2186/95 (study no. 2186-95) (457/812-99/105815) 4/12/96	860-1500
44828007	CGA-245704 and cyromazine - magnitude of the residues in or on crop group 5: brassica (cole) leafy vegetables (study no. 42-97) (457/42-97/105732) 3/26/99	860-1500

MRID #	STUDY TITLE	GUIDELINE #
44828008	CGA-245704 - magnitude of the residues in or on crop group 4: leafy vegetables (study no. 156-98) (457/156-98/106434) 4/1/99	860-1500
44828009	Global summary: CGA-245704/bananas - magnitude of the residue (study no. 212-99) (457/212-95/105734) 3/12/99	860-1500
44828010	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in costa rica 2087/98 (study no. 2087-98) (457/784-99/106967) 2/15/99	860-1500
44828011	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in costa rica 2088/98 (study no. 2088-98) (457/785-99/105812) 2/15/99	860-1500
44828012	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in costa rica 2089/98 (study no. 2089-98) (457/786-99/105739) 2/15/99	860-1500
44828013	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in ecuador 2090/98 (study no. 2090-98) (457/787-99/105745) 2/15/99	860-1500
44828014	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in ecuador 2091/98 (study no. 2091-98) (457/788-99/105746) 2/15/99	860-1500
44828015	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in ecuador 2092/98 (study no. 2092-98) (457/789-99/105738) 2/15/99	860-1500
44828016	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in columbia 2093/98 (study no. 2093-98) (457/790-99/105818) 2/15/99	860-1500
44828017	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in colombia 2094/98 (study no. 2094-98) (457/791-99/105813) 2/15/99	860-1500
44828018	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in mexico 2095/98 (study no. 2095-98) (457/792-99/105741) 2/15/99	860-1500
44828019	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in guatemala 2098/98 (study no. 2098-98) (457/793-99/105735) 2/19/99	860-1500
44828020	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in guatemala 2099/98 (study no. 2099-98) (457/794-99/105736) 2/19/99	860-1500
44828021	Storage stability study of total residues of CGA-245704 in fortified bananas (whole fruits) under freezer storage conditions 154/95 (study no. 154-95) (457/817-99/105743) 1/19/99	860-1500
44828022	Validation report of special study 117/95 (study no. 117-98) (457/819-99/106968) 8/2/95	860-1500
44828023	Validation report of special study 125-95 (study no. 125-95) (457/818-99/106970) 8/9/95	860-1500
44828024	Validation report of special study 157/95 (study no. 157-95) (457/820-99/105817) 8/9/95	860-1500
44828025	CGA-245704 - field accumulation in rotational crops (study no. 110-97) (457/110-97/106917) 4/6/99	860-1900

SECTION 408(d)(2)(A)(v)

FULL REPORTS OF TESTS AND INVESTIGATIONS MADE WITH RESPECT TO THE NATURE AND AMOUNT OF THE PESTICIDE CHEMICAL RESIDUE THAT IS LIKELY TO REMAIN IN OR ON THE FOOD, INCLUDING A DESCRIPTION OF THE ANALYTICAL METHOD

The analytical method proposed for tolerance enforcement for residues of acibenzolar-S-methyl are a common moiety method. Analytical Method 671A was employed to determine residues of acibenzolar-S-methyl in raw agricultural commodities of the Cucurbit Vegetable Crop. This method is valid and accurate method for the determination of CGA-245704 and its metabolites. The limit of quantitation (LOQ), as demonstrated by the smallest acceptable fortification level used in the study, is 0.02 ppm of CGA-245704 equivalents for all substrates for both methods. The methods include radiolabeled CGA-245704 validation data.

The principle of the method is as follows: Benzo[1,2,3]thiadiazole-7-carbothioic acid S-methyl ester and metabolites containing the benzo[1,2,3]thiadiazole-7-carboxylic acid are hydrolyzed to benzo[1,2,3]thiadiazole-7-carboxylic acid. The extract is purified on by partition and/or solid phase extraction. Additional purification and final determination are performed using column switching high performance liquid chromatography (HPLC) with UV-detection or conformational HPLC analyses with mass spectrometric detection (LC/MS).

Novartis Analytical Method AG-671A is a practical and valid method for the determination and confirmation of CGA-245704 in RAC and processing substrates from the tobacco, leafy (including brassica) and fruiting vegetable crop groups and the cucurbit crop group at a limit of quantitation (LOQ) of 0.02 ppm. The method involves extraction, solid phase cleanup of samples with analysis by HPLC with UV detection or confirmatory LC/MS. The validity is demonstrated by the acceptable accuracy and precision obtained on numerous procedural recovery samples (radiovalidation and field trial sample sets), and by the extractability and accountability obtained by the analysis of weathered radioactive substrates using Analytical Method AG-671A.

A comprehensive report of these details is presented in reports for NCP Study Number 131-98 in the attached data volume.

SECTION 408(d)(2)(A)(v) -- CONTINUED

This petition is supported by nineteen field trials conducted representative members of the Cucurbit Crop Group. Crop samples were analyzed for by the total residue method AG-671A to determine the combined residues of acibenzolar-S-methyl and metabolites which contain the benzo[1,2,3]thiadiazole-7-carboxylic acid (BTCA) moiety.

The Highest Average Field Trial Value for CGA-245704 found in 0-day PHI samples was 0.83 ppm in cantaloupes. The average residue found in treated samples with a 0-day PHI was 0.21 ppm. In cucurbit vegetables with 0-day PHI, the average residues found in/on cantaloupes, cucumbers, and summer squash were 0.37 ppm, 0.17 ppm, and 0.11 ppm, respectively. In cucurbit vegetables with 0-day PHI, the maximum residues found in/on cantaloupes, cucumbers, and summer squash were 0.95 ppm, 0.43 ppm, and 0.18 ppm, respectively. A tolerance of 1.0 ppm for the cucurbit vegetables crop group has been requested. A tolerance of 1.0 ppm in cucurbit vegetables has been requested.

Acibenzolar-S-methyl: The following data volumes are being submitted to address the amount of the pesticide chemical remaining in or on food:

VOLUME #	STUDY TITLE	GUIDELINE #
1 OF 3	Transmittal document	NOT APPLICABLE
2 OF 3	CGA-215944 and CGA-245704 — Magnitude of the Residues In Or On Crop Group 9: Cucurbit Vegetables (NCP Study Number 131-98)	860-1500

SECTION 408(d)(2)(A)(v) -- CONTINUED

Acibenzolar-S-methyl: The following data volumes were submitted for Pesticide Petition No. 8F4974 and 9F6004 addressing the amount of the pesticide chemical remaining in or on food:

VOLUME #	STUDY TITLE	GUIDELINE #
44537051	CGA-245704: Behavior And Metabolism Of [U-14C-Phenyl]-CGA-245704 In Spring Wheat (Study No. PMR 9/94) (379/788-95	860-1300
44537052	CGA-245704: Behavior And Metabolism Of CGA-245704 In Greenhouse Grown Paddy Rice After Granular Application Of [Phenyl-(U)-14C] Labelled Material (Study No. PMR 9/96) (379/495/96)	860-1300
44537053	Metabolism Of CGA-245704 In Greenhouse Grown Tomatoes After Treatment With [Phenyl-(U)-14C] Labelled Material (Study No. PMR 01/96) (379/492-96)	860-1300
44537054	CGA-245704: Metabolism Of CGA-245704 In Greenhouse Grown Lettuce After Treatment With [Phenyl-(U)-14C] Labelled Material (Study No. PR 96MKO2PR1) (379/272-98)	860-1300
44537055	CGA-245704: Determination Of CGA-245704 By U.S. Food And Drug Administration Multiresidue Methods (Study No. ABR-98024) (379/582-97)	860-1340
44537056	CGA-245704: Independent Laboratory Validation Of Novartis Method AG-671 Entitled, "Analytical Method For The Determination Of Total Residues Of CGA-245704 As CGA-210007 In Tobacco, Leafy Vegetables, And Fruiting Vegetables By Column Switching High Performance Liquid Chromatography" (Study No. 6117-380) (379/172-98)	860-1340
44537057	CGA-245704: Validation Of Draft Analytical Method AG-671 For The Determination Of Total Residues Of CGA-245704 As CGA-210007 In Tobacco, Leafy Vegetables, And Fruiting Vegetables By Column Switching High Performance Liquid Chromatography (HPLC) (Study No. ABR-97117) (379/491-97)	860-1340
44537058	CGA-245704: Analytical Method For The Determination Of Total Residues Of CGA-245704 As CGA-210007 In Tobacco, Leafy Vegetables, And Fruiting Vegetables By Column Switching High Performance Liquid Chromatography (Study No. AG-671a Supercedes AG-671) (379/491-97)	860-1340
44537059	CGA-245704: Stability Of CGA-245704 And CGA-210007 In Crops And Processed Fractions Under Freezer Storage Conditions (3-Month Interim Report) (Study No. ABR-97141) (379/422-97)	860-1380
44537060	CGA-245704 - Magnitude Of The Residues In Or On Crop Group 8: Fruiting Vegetables (Study No. ABR-97140) (379/93-96)	860-1500
44537061	CGA-245704 - Magnitude Of The Residues In Or On Tobacco (Study No. ABR-97138) (379/91-96)	860-1500
44537062	CGA-245704 - Magnitude Of The Residues In Or On Crop Group 4: Leafy Vegetables (Study No. ABR-97139) (379/92-96)	860-1500
44537063	14C-CGA-245704: Uptake And Distribution Of Residues In Field Grown Confined Rotational Crops (Study No. ABR-98002) (379/248-96)	860-1850

VOLUME #	STUDY TITLE	GUIDELINE #
44828002	Analytical method for the determination of cyromazine and its metabolite melamine resiudes in crops by gas chromatography with a nitrogen/phosphorus detector in the nitrogen specific mode (study no. AG-621) (457/3722) 1/12/95	860-1340
44828003	Determination of total residues of CGA-245704 as CGA-210007 by high performance liquid chromatography (HPLC) rem 172.02 (study no. 814-99) (457/814-99/105816) 12/6/93	860-1500
44828004	Determination of total residues of CGA-245704 determined as CGA-210007 in bananas (pulp and peel) - field trial 2181/95 (study no. 2181-96) (457/811-99/105814) 3/9/96	860-1500
44828005	Determination of total residues of CGA-245704 determined as CGA-210007 in bananas (pulp and peel) - field trial 2187-95 (study no. 2187-95) (457/813-99/106094) 3/22/96	860-1500
44890801	Determination of total residues of CGA-245704 as CGA-210007 by high performance liquid chromatography - rem 172.11 (study no. 172-11) (457/815-99/106969) 10/20/95	860-1500
44828006	Determination of total residues of CGA-245704 determined as CGA-210007 in bananas (pulp and peel) - field trial 2186/95 (study no. 2186-95) (457/812-99/105815) 4/12/96	860-1500
44828007	CGA-245704 and cyromazine - magnitude of the residues in or on crop group 5: brassica (cole) leafy vegetables (study no. 42-97) (457/42-97/105732) 3/26/99	860-1500
44828008	CGA-245704 - magnitude of the residues in or on crop group 4: leafy vegetables (study no. 156-98) (457/156-98/106434) 4/1/99	860-1500
44828009	Global summary: CGA-245704/bananas - magnitude of the residue (study no. 212-99) (457/212-95/105734) 3/12/99	860-1500
44828010	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in costa rica 2087/98 (study no. 2087-98) (457/784-99/106967) 2/15/99	860-1500
44828011	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in costa rica 2088/98 (study no. 2088-98) (457/785-99/105812) 2/15/99	860-1500
44828012	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in costa rica 2089/98 (study no. 2089-98) (457/786-99/105739) 2/15/99	860-1500
44828013	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in ecuador 2090/98 (study no. 2090-98) (457/787-99/105745) 2/15/99	860-1500
44828014	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in ecuador 2091/98 (study no. 2091-98) (457/788-99/105746) 2/15/99	860-1500
44828015	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in ecuador 2092/98 (study no. 2092-98) (457/789-99/105738) 2/15/99	860-1500

VOLUME #	STUDY TITLE	GUIDELINE #
44828016	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in columbia 2093/98 (study no. 2093-98) (457/790-99/105818) 2/15/99	860-1500
44828017	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in colombia 2094/98 (study no. 2094-98) (457/791-99/105813) 2/15/99	860-1500
44828018	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in mexico 2095/98 (study no. 2095-98) (457/792-99/105741) 2/15/99	860-1500
44828019	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in guatemala 2098/98 (study no. 2098-98) (457/793-99/105735) 2/19/99	860-1500
44828020	Residue study with CGA-245704 (acibenzolar-s-methyl [iso draft]) in or on bananas in guatemala 2099/98 (study no. 2099-98) (457/794-99/105736) 2/19/99	860-1500
44828021	Storage stability study of total residues of CGA-245704 in fortified bananas (whole fruits) under freezer storage conditions 154/95 (study no. 154-95) (457/817-99/105743) 1/19/99	860-1500
44828022	Validation report of special study 117/95 (study no. 117-98) (457/819-99/106968) 8/2/95	860-1500
44828023	Validation report of special study 125-95 (study no. 125-95) (457/818-99/106970) 8/9/95	860-1500
44828024	Validation report of special study 157/95 (study no. 157-95) (457/820-99/105817) 8/9/95	860-1500
44828025	CGA-245704 - field accumulation in rotational crops (study no. 110-97) (457/110-97/106917) 4/6/99	860-1900
44993301	Stability of CGA-245704 and CGA-210007 in crops and processed fractions under freezer storage conditions (NCP Study No. 422-97)	860-1500
44993302	14CGA-245704: uptake and Distribution of Residues in Field Grown Confined Rotational Crops – Amendment 1 (NCP Study No. 248-96)	860-1500

SECTION 408(d)(2)(A)(vi)

A PRACTICAL METHOD FOR DETECTING AND MEASURING THE LEVELS OF THE PESTICIDE CHEMICAL RESIDUE IN OR ON THE FOOD

Refer to the Section 408 (d) (2) (A) (v) for a description of the analytical method used to detect and measure levels of the pesticide chemical on food.

SECTION 408(d)(2)(A)(vii)

PROPOSED TOLERANCE FOR THE PESTICIDE CHEMICAL

Tolerance are proposed for the residues of the fungicide acibenzolar-S-methyl / CGA-245704 (Benzo [1,2,3] thiadiazole-7-carbothioic acid-S-methyl ester) in or on the following commodities:

Commodity	Proposed Tolerance (Parts Per Million)
Cucurbit Vegetables Crop Group	1.0

SECTION 408(d)(2)(A)(viii)

REPORTS OF INVESTIGATIONS CONDUCTED USING THE PROCESSING METHOD(S) TO PRODUCE THAT FOOD

Refer to the Section 408 (d) (2) (A) (v) for a description of the methods used to detect and measure levels of the pesticide chemical in processed food.

SECTION 408(d)(2)(A)(ix)

INFORMATION REQUIRED TO MAKE THE DETERMINATION UNDER SUBSECTION (b)(2)(C) - EXPOSURE TO INFANTS AND CHILDREN

FFDCA section 408 provides that EPA may apply an additional safety factor for infants and children in the case of threshold effects to account for pre- and post-natal toxicity and the completeness of the database. In assessing the potential for additional sensitivity of infants and children to residues of acibenzolar-S-methyl, Novartis considered data from teratogenicity studies in the rat and the rabbit and a 2-generation reproduction study in the rat. The teratogenicity studies are designed to evaluate adverse effects on the developing embryo as a result of chemical exposure during the period of organogenesis. Reproduction studies provide information on effects from chemical exposure on the reproductive capability of mating animals and systemic and developmental toxicity from in-utero exposure.

Embryotoxicity and fetotoxicity were apparent at maternally toxic doses of CGA 245704 technical in rats and rabbits. Increased incidences of early resorptions, common skeletal anomalies and variations, and slightly delayed ossification were observed in rats and rabbits only at maternally toxic doses and are, therefore, most appropriately regarded as a result of maternal toxicity.

In the rat teratology study reduced body weight gains were observed in dams at the top dose groups of 200 and 400 mg/kg. At the 400 mg/kg dose group, a significant increase in early resorptions was also found, coupled with slight reductions in mean maternal body weights. At 200 and 400 mg/kg doses, some of the surviving fetuses showed reduced body weights and some had various types of malformations. Fetal examinations revealed increased incidences of malformations in the 400 mg/kg dose group. The findings included hydrocephalus, irregular ossifications, omphalocele and splenic aplasia. Microphthalmia and anophthalmia were noted in one fetus each. The skeletal examination revealed increased incidences of anomalies. In the 200 mg/kg dose group, two fetuses (2/331) from one litter showed gastroschisis. One of the affected individuals also had microphthalmia and anophthalmia. Increased incidences of skeletal variations were also observed in both the 200 and 400 mg/kg dose groups, indicating a slight delay in fetal ossification.

In the rat multigeneration study acibenzolar-S-methyl had no effect on rat reproductive parameters including gonadal function, estrus cycles, mating behavior, conception, parturition, lactation, weaning, and sex organ histopathology. At 4000 ppm, parental body weights were reduced. In the F1 groups, post natal weight gain in sucklings was slightly reduced at >2000 ppm. However, this reduction had no influence on the physiological development of the pups. Histopathological observations revealed no effects on the reproductive organs and only moderate hemosiderosis in the spleen of F0 and F1 parental animals at >2000 ppm. The NOEL for reproductive toxicity in adults and offspring was 200 ppm, corresponding to a mean daily intake of approximately 25 mg/kg/day.

The chronic RfD of 0.11 mg/kg/day based on the mouse carcinogenicity study is appropriate for assessing aggregate risk to and protecting the health of infants and children.

SECTION 408(d)(2)(A)(ix) (Continued)

INFORMATION REQUIRED TO MAKE THE DETERMINATION UNDER SUBSECTION (b)(2)(C) - EXPOSURE TO INFANTS AND CHILDREN

No toxicological endpoint attributable to a single exposure was identified in the toxicity studies on acibenzolar-S-methyl that is applicable to the general population, including infants and children. The acute oral LD_{50} is greater than 5000 mg/kg/day. The Hazard Identification Assessment Review Committee (HIARC; 12/9/99) determined that an acute exposure assessment was not necessary for the general population, infants and children. Novartis believes acibenzolar-S-methyl should be classified as a "Not Likely" carcinogen based on the lack of carcinogenicity in rats and mice.

Therefore, based on the completeness and reliability of the toxicity database, Novartis concludes that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to residues of acibenzolar-S-methyl.

SECTION 408(d)(2)(a)(x)

INFORMATION ON ESTROGENICITY AND ENDOCRINE DISRUPTION

Acibenzolar-S-methyl does not belong to a class of chemicals known or suspected of having adverse effects on the endocrine system. The chronic studies showed no evidence of a long-term effects related to the endocrine system.

In the rat multigeneration study acibenzolar-S-methyl had no effect on rat reproductive parameters including gonadal function, estrus cycles, mating behavior, conception, parturition, lactation, weaning, and sex organ histopathology. Histopathological observations revealed no effects on the reproductive organs and only moderate hemosiderosis in the spleen of F0 and F1 parental animals at >2000 ppm. The NOEL for reproductive toxicity in adults and offspring was 200 ppm, corresponding to a mean daily intake of approximately 25 mg/kg/day. The thyroid and pituitary are not considered by Novartis to primary target organs for acibenzolar-S-methyl.

Further, due to low application rates and the rapid degradation of the product, there is little risk that acibenzolar-S-methyl may remain in the environment. In animals, acibenzolar-S-methyl is quickly excreted and has no tendency for accumulation in body tissues. Based on these results it is very likely that acibenzolar-S-methyl has no potential to interfere specifically with the endocrine system. Considering the low environmental concentrations and the lack of bioaccumulation potential, Novartis concludes that there is no risk of endocrine disruption in humans or wildlife.

SECTION 408(d)(2)(A)(xi)

INFORMATION REGARDING EXPOSURE TO THE PESTICIDE CHEMICAL RESIDUE DUE TO ANY TOLERANCE OR EXEMPTION ALREADY GRANTED FOR SUCH RESIDUE

The residue data is presented in Section 408(d)(2)(A)(v) cucurbit vegetable commodities These raw Agricultural commodities do not contribute significantly to animal feeds, potential transfer of acibenzolar-S-methyl into milk and meat is not likely.

A petition (PP#8F4974) requesting tolerances for leafy and fruiting vegetables was submitted to the EPA on March 31, 1998. A petition (PP#9004) requesting tolerances for leafy brassica vegetables was submitted to the EPA on May 7, 1999. There are no other established U.S. tolerances for acibenzolar-S-methyl, and there are no other registered uses for the compound in the United States.

Other potential sources of exposure of the general population to residues of pesticides are residues in drinking water and exposure from non-occupational sources. Based on the available data, Novartis believes the potential for exposure to acibenzolar-S-methyl through drinking water (surface or ground) is low. Acibenzolar-S-methyl is applied at a low rate (1oz/A), degrades rapidly, has a strong binding affinity to soil, and has a low leaching potential.

Estimated Environmental Concentrations (EECs) for human health risk assessment are calculated using GENEEC (surface water) and SCIGROW (ground water) using the maximum application rate of 0.31 pounds active ingredient x 6 applications per year. The resulting ground water screening concentration is negligible.

Occupational and dietary exposures associated with the use of CGA-245704 will not lead to the uptake of toxicologically relevant doses of CGA-245704. Based on this assessment, it is concluded that CGA-245704 will not cause any adverse health effects under the proposed conditions of use.

This petition and Pesticide Petition No. 8F4974 and 9F6004 contain the first uses for acibenzolar-S-methyl in the USA, all of which are for Agricultural crops. Novartis therefore believes that the potential for non-occupational exposure to the general population is negligible.

Novartis also believes that the potential for cumulative effects of acibenzolar-S-methyl are negligable given that this active ingredient represents a new class of chemistry for disease control.

SECTION 408(d)(2)(A)(xii)

PRACTICAL METHODS FOR REMOVING ANY AMOUNT OF THE RESIDUE THAT WOULD EXCEED ANY PROPOSED TOLERANCES

The residue data presented in Section 408(d)(2)(A)(v) of this petition indicate that the tolerance proposed in Section 408 (d)(2)(A)(vii) will not be exceeded when acibenzolar-S-methyl is used in pesticide formulations in accordance with the proposed amount, frequency, and timing of application in Section 408(d)(2)(A)(iii). If the proposed Directions for use are not followed and excessive acibenzolar-S-methyl residues result, there is no economic or practical method for removing these residues.

SECTION 408(d)(2)(A)(xiii)

OTHER DATA AND INFORMATION

Ecological and Environmental Fate Effects

CGA-245704 is considered practically non-toxic to avian species and honeybees. CGA-245704 is also practically non-toxic to terrestrial plants at levels above proposed application rates. CGA-245704 is considered moderately to highly toxic to aquatic organisms; however, using conservative exposure modeling estimates, risk to endangered and non-endangered organisms is minimal.

CGA-245704 is broken down via photolysis and microbial degradation and is therefore not expected to persist in the environment. Aqueous and soil photolysis irradiated half lives for CGA-245704 are 0.6 hours and 1 day, respectively. The aerobic soil metabolism and anaerobic aquatic metabolism half lives are 5.3 hours (aerobic) and 4.0 days (primary half-life, anaerobic aquatic), respectively. The aerobic aquatic half-life was less than 1 day. The field dissipation half lives ranged from less than 1 day (NC) to 27 days (CA). The adsorption/desorption and the leaching studies show CGA-245704 has low to medium (K_{oc} = 492-3288) mobility, depending on the organic matter content of the soil. Under aerobic soil, aerobic aquatic and anaerobic aquatic conditions, CGA-245704 quickly degrades to an acid, CGA-210007. Under aerobic metabolism conditions, CGA-245704 further mineralizes to CO_2 with the remainder bound to soil. This strong binding potential was confirmed via field dissipation trials in which CGA-245704 and its degradate (CGA-210007) were not observed below the 3-inch core layer after the last application in the bare soil plots (CA and NC) with the exception of two replicates. These soil dissipation methods were designed around parent (CGA-245704) and CGA-210007. This strong binding affinity for soil and the rapid half-life reduce the bioavailability of CGA-245704 to non-target species. Under hydrolytic conditions CGA-245704 is stable in acidic solutions (pH 5) and labile in alkaline solutions (pH9).

CGA-245704 showed no significant bioaccumulation in Bluegill sunfish and was rapidly eliminated from the fish when they were placed in untreated water. Specifically, the bioaccumulation factors (BCF) were 48 (edible), 199 (non-edible), and 118 (whole fish).

Estimated Environmental Concentrations (EECs) for human health risk assessment are calculated using GENEEC (surface water) and SCIGROW (ground water) using the maximum application rate of 0.31 pounds active ingredient x 6 applications per year. The resulting ground water screening concentration is negligible.

SECTION 408(d)(2)(A)(xiii) – CONTINUED

OTHER DATA AND INFORMATION

CGA245704 Technical: data included in the previous submissions.

MRID #	STUDY TITLE	GUIDELINE #
44537004	CGA-245704: Acute Oral Toxicity (Ld50) To The Mallard Duck (Study No. CBG 625/931492) (379/573-93)	071-1
44537005	CGA-245704: Acute Oral Toxicity (Ld50) To The Bobwhite Quail With CGA-245704 (Study No. CBG 624/931489) (379/572-93)	071-1A
44537006	CGA-245704 Subacute Dietary Toxicity (LC50) To The Bobwhite Quail With CGA-245704 (Study No. CBG 622/931451) (379/570-93)	071-2A
44537007	CGA-245704 Terrestrial And Aquatic Ecological Risk Assessment For 245704 (STUDY NO. 239-98) (379/239-98)	NOT APPLICABLE
44537008	CGA-245704 Subacute Dietary Toxicity (Lc50) To The Mallard Duck With CGA-245704 (Study No. CBG 623/931450) (379/571-93)	071-2B
44537009	CGA-245704 Bobwhite Quail Dietary Reproduction And Tolerance Studies With CGA-245704 (Study No. CBG 621/942676) (379/595-93)	071-4A
44537010	CGA-245704 Mallard Duck Dietary Reproduction And Tolerance Studies With CGA-245704 (Study No. CBG 620/942943) (379/596-93)	071-4B
4453701	CGA-245704 A 96-Hour Flow-Through Acute Toxicity Test With The Bluegill (Lepomis Macrochirus) (Study No. 108A-176)(379/148-96)	072-1A
44537012	CGA-21007: Acute Toxicity Test Of CGA-210007 Technical (Metabolite Of CGA-245704) To Rainbow Trout (Oncorhynchus Mykiss) In The Static System (Study No. 943649)(379/789-95)	072-1
44537013	CGA-245704 A 96-Hour Flow-Through Acute Toxicity Test With The Rain Bow Trout (Oncorhynchus Mykiss) (Study No. 108A-177)(379/147-96)	072-1C
44537014	CGA-245704: A 48-Hour Flow-Through Acute Toxicity Test With The Cladoceran, (Daphnia MAGna) (Study No. 108A-175)(379/149-96)	072-2A
44537015	CGA-210007 Report On The Acute Toxicity Test Of CGA-210007 Technical (Metabolite Of CGA-245704) On Daphnia (Daphnia MAGna Straus 1920) (Study No. 943555)(/511-94)	072-2
44537016	CGA-245704: A 96-Hour Flow-Through Acute Toxicity Test With The Sheepshead Minnow, (Cyprinodon Variegatus) (Study No. 108A-178)(379/152-96)	072-3A
44537017	CGA-245704: A 96-Hour Shell Deposition Test With The Eastern Oyster, (Crassostrea Virginica) (Study No. 108A-180)(279/151-96)	072-3B
44537018	CGA-245704: A 96-Hour Flow-Through Acute Toxicity Test With The Saltwater Mysid (Mysidopsis Bahia) (Study No. 108A-179)(379/150-96)	072-3C

MRID #	STUDY TITLE	GUIDELINE #
44537019	CGA-245704: An Early Life-Stage Toxicity Test With The Rainbow Trout (Oncorhynchus Mykiss) (Study No. 108a-186)(379/154-96)	072-4A
44537020	CGA-245704: A Flow-Through Life-Cycle Toxicity Test With The Cladoceran, Daphnia Magna (Study No. 108A-187) (379/153-96)	072-4B
44537028	CGA-245704 50 WG: A Toxicity Test To Determine The Effects Of The Test Substance On Vegetative Vigor Of Ten Species Of Plants (Study No. 108-389) (379/308-97)	122-1B
44537030	EFFECT OF CGA-245704 On The Growth And Reproduction Of Selenastrum Capricornutum (Study No. 21-01-1))379/367-96)	123-2
44537031	CGA-210007: Report On The Growth Inhibition Test Of CGA-210007 Technical (Metabolite Of CGA-245704) To Green Algae (Selenastrum Capricornotum) (Study No. 943650) (379/790-95)	123-2
44537032	CGA-245704: Effect Of CGA-245704 On The Growth And Reproduction Of Lemna Gibba (Study No. 21-01-2) (379/368-96)	123-2
44537033	CGA-245704: Laboratory Testing For Toxicity (Acute Contact And Oral LD50) Of CGA-245704 To Honey Bees, Apis Mellifera L (Study No. 417003) (379/574-93)	141-1
44537034	CGA-245704: Aqueous Photolysis Of 14C-CGA-245704 (STUDY NO. 12228) (379/112-96) VOLUME 1 OF 2	161-2
44681301	CGA-245704 Technical: Rangefinding Rat Dietary Reproduction Study	083-4
3 OF 3 in March 30, 2000	Teratology Study of Acibenzolar-S-methyl in Rats (NCP Study Number 1197-98)	870.3700

SECTION 408(d)(2)(A)(xiii) – CONTINUED

OTHER DATA AND INFORMATION

MRID #	STUDY TITLE	GUIDELINE #
44537034	CGA-245704: Aqueous Photolysis of 14C-CGA-245704 (STUDY NO. 12228) (379/112-96) Volume 2 Of 2	161-2
44537035	CGA-245704: Photodegradation Of (Phenyl-U-14C) CGA-245704 On Soil Under Artificial Sunlight (Study No. 12229) (379/111-96)	161-3
44537036	CGA-245704: Degradation Of CGA-245704 In Soil Under Aerobic, Aerobic/Anaerobic And Sterile/Aerobic Conditions At 20 Degree C (Study No. 93da02) (379/568-93)	161-3
44537037	CGA-245704:Anaerobic Aquatic Metabolism Of (U-Phenyl-14C)CGA-245704 (Study No. Abr-97122) (379/219-96)	162-3
44537038	CGA-245704: Degradation And Metabolism Of 14C-CGA-245704 In Aerobic Aquatic Systems (Study No. 94da01) (379/487-94)	162-4
44537039	Design And Interpretation Of Herbicide Anaerobic Quatic Metabolism Studies (Study No. Na) (379	NOT APPLICABLE
44537040	CGA-245704: Laboratory Column Leaching Characteristics Of Aged [Phenyl-U-14C] CGA-245704 In Six Soil Types (Study No. 12239) (379/45-97)	163-1
44537014	CGA-245704: Adsorption/Desorption Of 14C-CGA-245704 By The Batch Equilibrium Method On Representative Agricultural Soils (Study No. 12226) (379/107-96)	163-1
44537042	CGA-245704: Adsorption/Desorption Of 14C-CGA-210007 By The Batch Equilibrium Method On Representative Agricultural Soils (Study No. 12227) (379/108-96)	163-1
44537043	CGA-245704: Independent Laboratory Validation Of The Analytical Method Rem 172.08 "Determination Of The Metabolite CGA-210007 By High Performance Liquid Chromatography (HPLC)" (Study No. 110s39) (379/146-96)	SUBDIVISION N
44537044	Determination Of Residues Of Parent Compound By High Performance Liquid Chromatography (HPLC) (Study No. Rem 172.04) (379/218-98)	164-1
44537045	CGA-245704: Independent Laboratory Validation Of The Analytical Method Rem 172.04 "Determination Of Residues Of Parent Compound By High Performance Liquid Chromatography (HPLC)" (Study No. 110s38) (379/145-96)	SUBDIVISION N
44537046	CGA-245704: Terristrial Field Dissipaton Of CGA-245704-50WG With Tomatoes And Bare Soil In California (Study No. Wei 242.18 And MVTL 01-9604) (379/121-96)	164-1
44537047	CGA-245704: Terrestrial Field Dissipation Of CGA-245704 50WG With Bare Soil In North Carolina (Study No. WEI 242.33 AND MVTL 01-9706) (379/303-97)	164-1
44537048	CGA-245704: Determination Of The Metabolite CGA-210007 By High Performance Liquid Chromatography (HPLC) (Study No. REM 172-08) (379/219--98)	164-1
44537049	CGA-245704: Uptake, Depuration And Bioconcentration Of 14C-CGA-245704 In Bluegill Sunfish (Lepomis Macrochirus) Under Flow-Through Test Conditions (Study No. ABR-97035) (379/277-96)	165-4
44537051	ACTIGARD (CGA-245704) Summary Of Environmental Fate Studies For CGA-245704 (STUDY NO. ABR-97113) (379/633-97)	NOT APPLICABLE

SECTION 408(d)(2)(A)(xiii), CONTINUED

OTHER DATA AND INFORMATION

CGA 245704 Technical: Data previously submitted:

MRID #	STUDY TITLE	GUIDELINE #
44014207	Acute Oral Toxicity (LD50) To The Mallard Duck (573-93)	071-1A
44014208	Acute Oral Toxicity (LD50) To The Bobwhite Quail (572-93)	071-1B
44014209	Subacute Dietary Toxicity (LC50) To The Bobwhite Quail (570-93)	071-2A
44014210	Subacute Dietary Toxicity (LC50) To The Mallard Duck (571-93)	071-2B
44014211	CGA-245704: A 96-Hour Flow-Through Acute Toxicity Test With The Bluegill, Lepomis Macrochirus (148-96)	072-1A
44014212	CGA-245704: A 96-Hour Flow-Through Acute Toxicity Test With Rainbow Trout, Oncorhynchus Mykiss (147-96)	072-1C
44014213	CGA-245704: A 48-Hour Flow-Through Acute Toxicity Test With The Cladoceran, Daphnia Magna (149-96)	072-2A
44014251	Laboratory Testing For Toxicity Of CGA-245704 To Honey Bees (Apis Mellifera L) (574-93)	141-1
44014252	Hydrolysis Of CGA-245704 Under Laboratory Conditions (567-93)	161-1
44014253	Degradation Of CGA-245704 In Soil Under Aerobic/ Anaerobic & Sterile/Aerobic Conditions At 20 Degrees C (568-93)	162-2
44014254	Adsorption/Desorption Of CGA-245704 In Various Soil Types (468-94)	163-1
44014255	Behavior And Metabolism Of CGA 245704 In Greenhouse Grown Tobacco After Foliar Spray Application Of [Phenyl-(U)14C] CGA 245704 (Study No. PMR 02/96) (10528/182)	171-4A

SECTION 408(d)(2)(A)(xiii), CONTINUED

OTHER DATA AND INFORMATION

APPENDIX 1: Physical/Chemical Characteristics for Technical CGA 245704

Guideline Number.	Data Requirement	Summary
63-2	Color	Beige
63-3	Physical State	Fine powder
63-4	Odor	Weak, burnt-like
63-5	Melting Point	132.9°C
63-7	Density	1.54 g/ cm^3 at 22°C (typical)
63-8	Solubility	Water: 0.0077 g/l Methanol: 4.2 g/l Acetone: 28 g/l Toluene: 36 g/l n-Octanol: 5.4 g/l n-Hexane: 1.3 g/l Ethylacetate: 25 g/l Dichloromethane: 160 g/l
63-9	Vapor Pressure Henry's Law Constant	4.6×10^{-4} Pa at 25°C 1.3×10^{-2} Pa m^3/mole
63-10	Dissociation Constant	The compound has no dissociation constant in an accessible pH range.
63-11	Octanol/Water Partition Coefficient	log P_{ow} = 3.1 at 25°C
63-12	pH	7.9 (1% dispersion in H_2O @ 25°C)
63-13	Stability to Sunlight Stability to Metal Ions Stability to Metals	No decomposition > 1% No decomposition > 2% No decomposition > 1%
63-14	Oxidizing or Reducing Action	This active ingredient is not considered an oxidizing substance.
63-15	Flammability	Not Applicable; product is a solid.
63-16	Explodability Limits	Not considered an explosive as concluded from test results on: 1. Thermal sensitivity (effect of a flame) 2. Mechanical sensitivity (shock) 3. Mechanical sensitivity (friction)
63-17	Storage Stability	In Progress
63-18	Viscosity	Not Applicable; product is a solid.
63-19	Miscibility	Not Applicable; product is a solid.
63-20	Corrosion Characteristics	In Progress
63-21	Dielectric Breakdown Voltage	Not Applicable; product is a solid.

SECTION 408(d)(2)(A)(xiii), CONTINUED

OTHER DATA AND INFORMATION

APPENDIX 2: Physical/Chemical Characteristics for Actigard™ 50WG End Use Product

Guideline Number.	Data Requirement	Summary
63-2	Color	Light brown
63-3	Physical State	Solid
63-4	Odor	Moderate, sulphurous like
63-7	Density	0.61 g/cc
63-12	pH	9.5 (1% dispersion in H_2O @ 25°C)
63-14	Oxidizing or Reducing Action	Not applicable, product does not contain oxidizing or reducing Agents.
63-15	Flammability	Not Applicable; product is a solid.
63-16	Explodability Limits	Not considered an explosive as concluded from test results on: 1. Thermal sensitivity (effect of a flame) 2. Mechanical sensitivity (shock) 3. Mechanical sensitivity (friction)
63-17	Storage Stability	In Progress
63-18	Viscosity	Not Applicable; product is a solid.
63-19	Miscibility	Not Applicable; product is a solid.
63-20	Corrosion Characteristics	In Progress
63-21	Dielectric Breakdown Voltage	Not Applicable; product is a solid.

DP #: (298864) Decision #: 208664

DATA PACKAGE BEAN SHEET

Date: 18-Feb-2004

* * * Registration Information * * *

Registration: 100-921 - ACIBENZOLAR-S-METHYL TECHNICAL

Company: 100 - SYNGENTA CROP PROTECTION, INC.

Risk Manager: RM 22 - Cynthia Giles-Parker - (703) 305-7740 Room# CM-2 249

Risk Manager Reviewer: Robert Westin RWESTIN

Sent Date: 29-Jan-2003 Calculated Due Date: 05-Feb-2003 Edited Due Date:

Type of Registration: Product Registration - Section 3

Action Desc: (405) ADVERSE DATA (6A2);

Ingredients: 061402, 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methyl ester(98.6%)

* * * Data Package Information * * *

Expedite: ○ Yes ● No Date Sent: 18-Feb-2004 Due Back:

DP Ingredient: 061402, 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methyl ester

DP Title: Acibenzolar_S-methyl Developmental Neurotoxicity

CSF Included: ● Yes ○ No Label Included: ● Yes ○ No Parent DP #:

Assigned To	Date In	Date Out	
Organization: HED / IO			Administrative Due Date: 14-Mar-2004
Team Name:			Negotiated Due Date:
Reviewer Name:			Projected Completion Date:
Contractor Name:			

* * * Studies Sent for Review * * *

Printed on Page 2

* * * Additional Data Package for this Decision * * *

No Additional Data Packages

* * * Data Package Instructions * * *

Is the cited study (MRID 46046401 vol 2 thru 11) acceptable? Do the data support previous risk decisions?

Questions? Bob Westin 305-5721

DP#: (298864) *** Studies Sent for Review *** Decision#: (208664)

MRID	Citation/ Reference	Guideline
46046401	Pinto, P. (2002) CGA-245704 (Acibenzolar-s-Methyl): Developmental Neurotoxicity Study in Rats: Final Report. Project Number: RR0930, 2752/01. Unpublished study prepared by Central Toxicology Lab. (Syngenta). 2093 p.	870.6300/Developmental neuroto

Jacket

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Larry Zang
Senior Regulatory Product Manager
Sygenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

OCT 6 2003

Subject: Acibenzolar-S-methyl Technical
EPA Reg. No. 100-921
Data submission dated 12/2/02

Dear Mr. Zang:

Your submission of missing page 1767 on July 21, 2003, corrected the identified problems with the subject Developmental Neurotoxicity Study in Rats "CGA-245704 (Acibenzolar-S-methyl - Final Report)". The report is now in full compliance with the standards for submission of data contained in PR Notice 86-5.

This report has now been assigned the number MRID 460464-01. Please use this number in all future references to this study.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

/S/

Cynthia Giles-Parker
Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Note: hard copy of MRID 460464-01 vol 1-10 stored in CM 2 Room 267 pending technical review.
Reduction 10/3/03
Sent to HED 2/18/04
DP# 298864

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

September 5, 2003

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

SYNGENTA CROP PROTECTION, INC.
PO Box 18300
GREENSBORO, NC 27419-8300

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your submittal of 31-JUL-03. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

Syngenta Crop Protection, Inc. Tel 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

360464-00

syngenta

FEDERAL EXPRESS

December 3, 2002

Document Processing Desk
Registration Division
Office of Pesticide Programs (H7504C)
U. S. Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall 2, Room 266A
Arlington, VA 22202

Attn: Ms. Cynthia Giles-Parker

RE: Acibenzolar-S-Methyl (EPA Reg. No. 100-921)
Actigard 50WG (EPA Reg. No. 100-922)
Conditions of Registration Letter Dated August 11, 2000, Item 4
Developmental Neurotoxicity Study in Rats (870.6300)
Conditions of Registration Satisfied for 100-921 and 100-922.

Dear Ms. Giles-Parker:

Syngenta Crop Protection, Inc., is making a data submission related to the Acibenzolar-S-methyl Technical registration and the end use product Actigard 50WG issued on August 11, 2000. We requested an extension from the original due date in a letter to EPA dated July 15, 2002.

This submission satisfies all the conditions of registration associated with the subject products.

A summary of all submissions related to the subject conditions of registration letter is included as Attachment 1.

syngenta

Ms. Cynthia Giles-Parker
December 3, 2002
Page 2

Enclosed in support of this submission are:

- Transmittal Document
- Data Volumes

If you have any questions, please contact me at (336) 632-2146 or my Regulatory Assistant, Trina Brodie at (336) 632-2062.

Sincerely,

Larry Zang
Senior Regulatory Product Manager

Enclosures

cc: Maria Rodriguez, Team 22

Attachment 1

100–921 Acibenzolar–S–Methyl Technical
100–922 Actigard 50WG

Conditions of Registration Letter
August 11, 2000

Item	Study	Guideline No.	Submission Date	MRID
4	Developmental Neurotoxicity Study in Rats	870.6300	12/3/02	Not Assigned
4	Subchronic Neurotoxicity Study in Rats	870.6200	7/11/02	45713501
4	Mutagenicity Study (Ames Assay) With Technical Grade Acibenzolar–S–Methyl (Prepaid by a New "Thiazole" Production Process)	870.5100	6/20/01	45434101

The following studies must be upgraded:

Item	Study	Guideline No.	Submission Date	MRID
5	Soil Photolysis Study	161–3	6/20/01	45434103 45434104
5	Aerobic Soil Metabolism Study	162–1	6/20/01	45434103 45434104
5	Aerobic Aquatic Metabolism Study	162–4	6/20/01	45434103 45434104
5	One of Two Batch Equilibrium Study	163–1	6/20/01	45434103 45434104

VOLUME 1 OF 11 OF SUBMISSION
(TRANSMITTAL DOCUMENT)

1. **NAME AND ADDRESS OF SUBMITTER**

SYNGENTA CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 27419

2. **REGULATORY ACTION IN SUPPORT OF WHICH THIS PACKAGE IS SUBMITTED**

ACIBENZOLOR-S-METHYL (EPA REG. NO. 100-921)
ACTIGARD 50 WG (EPA REG. NO. 100-922)
CONDITIONS OF REGISTRATION LETTER DATED AUGUST 11, 2004, ITEM 4
DEVELOPMENTAL NEUROTOXICITY STUDY IN RATS (870.6300)
CONDITIONS OF REGISTRATION SATISFIED FOR 100-921 AND 100-922

3. **TRANSMITTAL DATE**

12/03/2002

4. **LIST OF SUBMITTED STUDIES**

MRID NUMBER	VOLUME NUMBER	STUDY TITLE	EPA GUIDELINE NUMBER
	1 OF 11	TRANSMITTAL DOCUMENT	NOT APPLICABLE
46046401	2-11 OF 11	CGA-245704 (ACIBENZOLAR-S-METHYL): DEVELOPMENTAL NEUROTOXICITY STUDY IN RATS; STUDY NUMBER RR0930, (1383) (2752-01, 415156)	870.6300

COMPANY OFFICIAL: LARRY ZANG **(NAME)** **(SIGNATURE)**

COMPANY NAME: SYNGENTA CROP PROTECTION, INC.

COMPANY CONTACT: LARRY ZANG **(NAME)** (336) 632-2146 **(PHONE)**

103 308
9373

S63/360

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

SEP 16 2003

Larry Zang
Senior Regulatory Product Manager
Sygenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Subject: Acibenzolar-S-methyl Technical
EPA Reg. No. 100-921
Amendment dated February 27, 2003

Dear Mr. Zang:

The Agency has completed the technical review of the mutagenicity study (MRID 454341-01) that you submitted in support of the subject revised basic Confidential Statement of Formula (CSF), and has concluded that the study adequately supports the revised CSF and removal of the impurity CGA-362020 from the CSF as you proposed. A copy of the Agency's Memorandum dated August 29, 2003 is enclosed for your records.

The revised basic Confidential Statement of Formula (CSF) dated 2/20/03 referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable. A copy of the Product Chemistry Review dated 6/20/03 is enclosed for your information.

Please note that this CSF supercedes all previous CSFs for this product and will be added to the regulatory file.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

CGP

Cynthia Giles-Parker
Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Enclosure

DATE:28/June/2003

SUBJECT: TGAI PRODUCT CHEMISTRY REVIEW / ACTION:345
DP BARCODE No.290015 EPA REG.No.100-921
CHEMICAL: CGA-245704 Technical Acibenzolar-S-Methyl
PCC for the AI: 061402
COMPANY: Syngenta Crop Protection Inc.

TO: PM 22: Cynthia Giles-Parker/ Maria Rodriguez, PM Team Reviewer
Branch:Fungicide
Registration Division (7505C)

FROM: Harold Podall, Ph.D., Chemist H. Podall 6/26/03
Technical Review Branch / RD(7505C) Sign 6/26/03

INTRODUCTION\DESCRIPTION OF SUBMISSION:

The registrant requests amendment of the current CSF of Acibenzolar-S-Methyl Technical, dated 3/20/98, by removing the impurity CGA 362020 from column 10 of the CSF in the revised CSF dated 2/20/03 in accord with 40 CFR 158.155, i.e., on the basis that its concentration is less than 0.!% and it is not of toxicological concern, and updating Box 5 of the CSF with the name of the current product manager, PM 22: Cynthia Giles-Parker.

SUMMARY OF FINDINGS:

1. Based on a five batch analyses of this technical product, 99 % purity, containing 1.0% of process related impurities, the impurity in question, CGA 362020, was not found to be present at a concentration as low as 0.1% by weight of the technical (MRID 454341-02).

2. Mutagenicity studies have shown that the the technical product CGA-245704 spiked with the impurity in question CGA-362020 is of no toxicological concern (reference p.13, MRID 454341-01).

3. The revised CSF dated 2/20/03 based on the "new" thiazole manufacturing process, which does not contain the impurity in question, is acceptable as per 40 CFR 158.155 (c) & (d).

CONCLUSIONS/RECOMMENDATIONS:

1. Because the concentration of the impurity in question is less than 0.1% by weight of the technical product and is of no toxicological concern it is not required to list the impurity in the updated CSF of 2/20/03.

2. The updated CSF based on the "new" thiazole manufacturing process for the technical product in which the impurity in question, CGA-362020, is not present at a concentration equal to or greater than 0.1% by weight of the technical and is of no toxicological concern, is acceptable, as per 40 CFR 158.155(c)&(d).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND
TOXIC SUBSTANCES

August 29, 2003

MEMORANDUM

EPA Reg. No. 100-921 CGA-245704 TECHNICAL
DP Barcode: 290017
Decision Code: D208665
Case No: 063610
Submission: S631360
PC Code: 61402 Acibenzolar-S-Methyl

From: Byron T. Backus, Ph.D., Toxicologist
Technical Review Branch
Registration Division (7505C)

Byron T. Backus
8/29/2003

To: Dennis McNeilly/Cynthia Giles-Parker, PM 22
Fungicide Branch
Registration Division (7505C)

Registrant: SYNGENTA CROP PROTECTION, INC.

ACTION REQUESTED: "This request was also sent for product chemistry review under D290015. Chem will need to know if you accept the argument presented in the letter and data cited that the impurity is not of TOX concern..." According to a letter dated February 27, 2003 from the registrant they are requesting to amend the current CSF of Acibenzolar-s-methyl by removing the impurity CGA-362020. The additional material includes analytical data showing that this impurity is now present at less than 0.1%. In addition, the registrant is citing an Ames study in MRID 45434101 which was conducted on technical CGA-245704 spiked with 0.5% CGA-362020

BACKGROUND: In an addendum (dated July 6, 2000, HED DOC. NO. 014246) to Report of the Hazard Identification Assessment Review Committee, Dated December 9, 1999, it was stated that following the RARC meeting of June 28, 2000, Edwin Budd

consulted Nancy McCarroll, and there was considerable discussion of the mutagenic potential of CGA-362020. In a previously reviewed Ames study (MRID 44537025) dose-related positive responses were observed in TA 1537 in the absence of S9 at concentrations of 277.8 µg/plate and higher, with no responses seen at 92.6 µg/plate and lower. It was hypothesized that technical CGA-245704 containing 0.1% CGA-362020 would probably be negative if the limit dose of 5000 µg/plate was assayed, because the actual amount of CGA-362020 would be approximately 5 µg/plate, considerably below the upper negative value of 92.6 µg/plate. It was decided that this should be verified by requiring the registrant to perform and submit an Ames study (with both plate incorporation and pre-incubation) on the new (CGA-362020 0.1% or less) technical grade product. If this Ames study was negative, it would be concluded that no additional mutagenicity testing on either CGA-362020 per se or on the new technical grade product would be necessary.

COMMENTS AND RECOMMENDATIONS:

1. The Ames assay in MRID 45434101 has been classified as acceptable. It demonstrates that there was no indication of an increase in the number of revertants of any test strain (including TA 1537 in the absence of metabolic activation, which had previously been found - refer to MRID 44537025 - to give a positive response on treatment with CGA-362020 at doses ≥277.8 µg/plate) at any dose level.

2. Since the test mixture contained 0.5% CGA-362020 then at the maximum concentration of 5000 µg/plate the bacterial cultures were exposed to 25 µg/plate. The lack of an observed response in TA 1537 is then consistent with the negative response observed in MRID 44537025 at doses of ≤92.6 µg/plate.

3. TRB concludes that the study in MRID 45434101 adequately supports the revised (amended) CSF and removal of the impurity CGA-362020, as proposed by the registrant in their letter of February 27, 2003.

EPA Reviewer: Byron T. Backus, Ph.D. **Signature:** Byron T Backus
Technical Review Branch, Registration Division (7505C) **Date** 8/29/2003
EPA Secondary Reviewer: John Redden **Signature:** John Redden
Technical Review Branch, Registration Division (7509C) **Date** 8/29/2003
Template version 11/01

TXR#:

DATA EVALUATION RECORD

STUDY TYPE: ***In vitro* Bacterial Gene Mutation *(Salmonella typhimurium and E. coli)*** mammalian activation gene mutation assay; OPPTS 870.5100[1] [§84-2]; OECD 471 (formerly OECD 471 & 472).

PC CODE: 061402 **DP BARCODE:** 290017
SUBMISSION NO.: S631360

TEST MATERIAL (PURITY): CGA 245704, batch no. AMS 692/3, purity 99.8% spiked with 0.5% CGA 362020, purity 99% (composition of tested mixture: CGA 245704 99.3% + CGA 362020 0.5%). Described as a powder.

SYNONYMS: Acibenzolar-S-methyl; CAS No. 135158-54-2

CITATION: Deparade, E. (1998) CGA-245704 Technical: Final Report: Salmonella and Escherichia/Mammalian-Microsome Mutagenicity Test. Genetic Toxicology, Novartis CropProtection AG, CH-4002 Basel, Switzerland. Basel No. 983053; Syngenta No. 1240-98. Completion Date: May 14, 1998. MRID 45434101. Unpublished.

SPONSOR: Syngenta Crop Protection, Inc.

EXECUTIVE SUMMARY: In a reverse gene mutation assay in bacteria (MRID 45434101), strains TA 98, TA 100, TA 102, TA 1535, and TA 1537 of *S. typhimurium* as well as *Escherichia coli* strain WP2 uvrA were exposed to CGA 245704, Batch No. AMS 692/3 (99.3%) spiked with 0.5% CGA 362020, Batch No. BPS 926/1, at concentrations of 312.5, 625, 1250, 2500 and 5000 µg/plate in the presence and absence of mammalian metabolic activation (S9 from male Tif:RAI/SPF rats which had been treated with Aroclor 1254 at 500 mg/kg i.p. 5 days prior to sacrifice) in the plate incorporation procedure (used +/-S9 the original assay and -S9 in the confirmatory assay) and preincubation procedure (used +S9 in the confirmatory assay).

---

[1]870.5100 - Reverse mutation *E. coli* WP2 and WP2uvrA; *S. typhimurium* TA 97, TA98, TA100, TA1535, TA1537

The mixture consisting of CGA 245704 (99.3%) spiked with CGA 362020 (0.5%) was tested up to a limit concentration (5000 µg/plate). The test material precipitated on the surface of the agar plates +/- S9 at 2500 and 5000 µg/plate. The test material caused growth inhibition with S9 at 5000 µg/plate in *E. coli* WP2 uvrA and TA 102, and in TA 102 -S9 at 5000 µg/plate, There was no indication of an increase in the number of revertants of any test strain (including TA 1537 in the absence of metabolic activation, which had previously been found - refer to MRID 44537025 - to give a positive response on treatment with doses of CGA 362020 $\geq$ 277.8 µg/plate) at any dose level. The positive controls induced the appropriate responses in the corresponding strains. **There was no evidence of an increased number of revertants of any dose strain at any dose level, nor was there any indication of a concentration-related positive response of induced mutant colonies over background. The test material is negative in this assay.**

This study is classified as acceptable, and satisfies the guideline requirement for the requirement for Test Guideline OPPTS 870.5100[1]; OECD 471 for *in vitro* mutagenicity (bacterial reverse gene mutation) data.

Note: the following is excerpted from T:\REVIEWS\061402\TOX\D246676.MEM.wpd (p. 17):

Gene Mutation- CGA-362020 (Isomer of Acibenzolar-S-Methyl)

Guideline 870.5100 Bacterial reverse mutation assay (Ames Test) with *S. typhimurium* and *E. coli* MRID 44537025 Acceptable	Positive in *S. typhimurium* strain TA1537 at 277.8 µg/plate and higher in the absence of S9. Negative with S-9 activation at 5000 µg/plate and less.

COMPLIANCE: Signed and dated GLP (p. 3), Quality Assurance (p. 6), and [No] Data Confidentiality (p. 2) statements are provided. There is a page (p. 4) reserved for flagging statements, stamped "Not Applicable."

I. MATERIALS AND METHODS

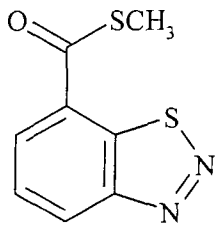
A. MATERIALS:

1. Test Material:

CGA 245704 spiked with 0.5% CGA 362020

Description: a powder, identified as stable
Lot/Batch #: AMS 692/3
Purity: 99.3% CGA 245704; 0.5% CGA 362020
CAS # of TGAI: 135158-54-2

Structure of CGA 245704 (CGA 362020 is identified as an isomer of CGA 245704):



Solvent Used: DMSO

2. Control Materials:

Negative: solvent - DMSO - used at 0.1 mL/plate
Solvent (final conc'n): DMSO (0.1 mL/plate)
Positive: Nonactivation:

Sodium azide 2 µg/plate TA100, TA1535
2-Nitrofluorene 5 µg/plate TA98
9-Aminoacridine 80 µg/plate TA1537
Mitomycin-C 0.5 µg/plate TA102
4-Nitroquinoline 2 µg/plate E. coli WP2 uvrA

Activation:

2-Aminoanthracene (2-anthramine) 1.5 µg/plate for TA 100, TA 98 and TA 1537; at 4 µg/plate for TA 102; and at 20 µg/plate for E. coli WP2 uvrA.
Cyclophosphamide 200 µg/plate for TA 1535

3. Activation: S9 derived from:

x	induced	x	Aroclor 1254	x	Rat (males, strain Tif:RAI/SPF)	x	Liver
	non-induced		Phenobarbitol		Mouse		Lung
			None		Hamster		Other

The S9 fraction was a commercial preparation from Animal Farm of BRL/CPB, Biological Research Laboratories Ltd., Füllinsdorf, Switzerland. The prepared S9 fraction was stored at approximately -80°C for no longer than one year. The protein

content of the S9 fraction was 34.79 mg/mL.

S9 mix composition:

Rat liver S9 fraction:	100.0 µ/mL
NADP	4.0 µmol/mL
$MgCl_2$	8.0 µmol/mL
KCl	33.0 µmol/mL
Na-phosphate buffer, pH 7.4	100.0 µmol/mL
Glucose-6-phosphate	5.0 µmol/mL

4. Test organisms: *S. typhimurium* strains:

	TA97	x	TA98	x	TA100	x	TA102		TA104
x	TA1535	x	TA1537		TA1538		list any others		

Properly maintained?	x	Yes		No
Checked for appropriate genetic markers (*rfa* mutation, R factor)?	x	Yes		No

In addition the study also used *E. coli* WP2 uvrA.

5. Test compound concentrations used: From p. 17 of MRID 45434101: "A range finding test was not performed, since data about toxicity were available from the study no. 923145 done before."

Nonactivated conditions: 312.5, 625, 1250, 2500 & 5000 µg/plate (original & confirmatory)
Activated conditions: 312.5, 625, 1250, 2500 & 5000 µg/plate (original & confirmatory)

Triplicate plates were prepared for each strain/concentration & negative or positive control/condition.

B. TEST PERFORMANCE

1. Type of *Salmonella* assay:

- x standard plate test (original experiment +/-S9; confirmatory -S9)
- x pre-incubation (confirmatory +S9; 30 minutes)
- _ "Prival" modification *(i.e. azo-reduction method)*
- _ spot test
- _ other

2. Protocol Standard plate incorporation assay: "0.1 mL of the overnight cultures were mixed with 2 mL of top agar, either 0.5 mL of 100 mM sodium phosphate buffer (experiments without activation) or 0.5 mL of the activation mixture (experiments with

activation) and 0.1 mL of a solution of the test substance, the positive control or the solvent as a negative control and poured on minimal agar in Petri dishes."

Preincubation assay: "0.1 mL of the overnight cultures were mixed with 0.5 mL of the activation mixture...and 0.1 mL of a solution of the test substance, the positive control or the solvent as a negative control and incubated for 30 min. at 37°C. Thereafter 2 mL of top agar were added to the mixtures and they were poured on minimal agar in Petri dishes."

"Each Petri dish [for both the standard plate incorporation assays and preincubation assays] contained about 20 mL of minimal agar (1.5% agar supplemented with 2% salts of the Vogel-Bonner Medium E and 2% glucose). The top agar was composed of 0.6% agar and 0.6% NaCl. In the experiment with Salmonella the top agar was supplemented with 10% of 0.5 mM L-histidine and 0.5 mM d-biotin dissolved in water. In the experiment with E. coli it was supplemented with 10% of 0.5 mM L-tryptophan dissolved in water."

"...Each of the five concentrations of the test substance, a negative and a positive control were tested, using three plates per test substance concentration and controls... The plates were inverted and incubated for about 48 hours at 37 ± 1.5°C in darkness. Thereafter, they were evaluated by counting the number of colonies and determining the background lawn."

"Colonies were counted electronically...or manually where minor agar damage or test chemical precipitates or strong coloration of the agar plates might have interfered with automated counting. The results were sent on line to a computer... Observations indicating precipitates of the test substance in the top agar or a reduced or absent bacterial background lawn were registered additionally. Means for all mutagenicity assays were calculated and included in the Results section..."

3. Statistical Analysis: From p. 19 of MRID 45434101: "A statistical analysis was not performed. At present the use of statistical methods concerning this particular test system is not generally recommended..."

4. Acceptance Criteria: From p. 18 of MRID 45434101: "A test is considered acceptable if the mean colony counts of the negative control values of all strains are within the acceptable ranges and if the results of the positive controls meet the criteria for a positive response. In either case the final decision is based on the scientific judgement of the Study Director."

5. Evaluation Criteria: From p. 19 of MRID 45434101: "The test substance will be considered to be positive in the test system if one or both of the following conditions are

met:

At least a reproducible doubling of the mean number of revertants per plate above that of the negative control at any concentration for one or more of the following strains: TA 98, TA 1535, TA 1537, E. coli WP2 uvrA.

A reproducible increase of the mean number of revertants per plate for any concentration above that of the negative control by at least a factor of 1.5 for strains TA 100 or TA 102.

"Generally a concentration-related effect should be demonstrable."

II. REPORTED RESULTS:

From p. 19 of MRID 45434101: "To confirm that the cells were actually exposed to the intended test concentrations and to confirm the stability of the test substance in the vehicle used, determination of the concentration of the test substance in solution was performed by HPLC with UV-detection. The values found by analysis of the different samples were in agreement with the intended concentrations..."

A. PRELIMINARY CYTOTOXICITY ASSAY:

From p. 17 of MRID 45434101: "A range finding test was not performed, since data about toxicity were available from the study no. 923145 done before."

B. MUTAGENICITY ASSAY: There was no indication of an increased number of revertants in either the initial or confirmatory assay, either as a dose-related response or at individual dose levels This included strain TA 1537 in the absence of metabolic activation. The positive controls elicited appropriate responses. The mean numbers of revertants for solvent (negative) controls were within acceptable ranges.

III. DISCUSSION and CONCLUSIONS

A. INVESTIGATORS' CONCLUSIONS: The study author reports that in both experiments (both with and without metabolic activation) none of the tested concentrations of CGA 245704 spiked with 0.5% CGA 362020 showed an increased incidence of revertants of either histidine- (*Salmonella typhimurium* strains TA 98, TA 100, TA 102, TA 1535 and TA 1537) or tryptophan- (*Escherichia coli* WP2 uvrA) prototrophic mutants by comparison with their respective controls. The study was conducted at concentrations ranging from 312.5 to 5000 µg/plate.both in the presence and absence of metabolic activation.

B. REVIEWER COMMENTS: We accept the study author's conclusions. It is noted that the negative findings are consistent with the statement from Nancy McCarroll that technical CGA-245704 containing 0.1% CGA-362020 (or for that matter, 0.5%) would probably be negative if the limit dose of 5000 µg/plate was assayed, because the actual amount of CGA-362020 would be approximately 5 µg/plate, considerably below the upper negative value of 92.6 µg/plate for CGA-362020 observed in the previously reviewed Ames study (MRID 44537025) for TA 1537.

C. STUDY DEFICIENCIES: None

TABLE 1. Representative Results of the Microbial/Mammalian Microsome Mutation Assay with CGA 245704 (99.3%) + CGA 362020 (0.5%) -- Trial 1

Substance	Dose per Plate	S9 Activation	Revertants per Plate of Microbial Tester Strains[a] S. typhimurium TA100	TA1535	TA98	TA1537	TA102	E. coli WP2 uvrA
Solvent Control[a]								
DMSO	100 µL	-	107.7	19.7	20.3	14.7	265.7	33.0
	100 µL	+	97.7	19.3	30.7	13.7	322.7	29.7
Positive Controls[a]								
NaN3	2 µg	-	1163.3	761.7	--	--	--	--
2NF	5 µg	-	--	--	250.0	--	--	--
9AA	80 µg	-	--	--	--	1463.3	--	--
MMC	0.5 µg	-	--	--	--	--	1856.7	--
4NQO	2 µg	-	--	--	--	--	--	722.3
2AA	1.5 µg	+	1732.7	--	1825.7	403.0	--	--
	4 µg	+	--	--	--	--	1637.0	
	20 µg	+	--	--	--	--	--	1231.7
CP	200 µg	+	--	224.7	--	--	--	--
Test Material[a]								
CGA 245704[b]	1250 µg[c]	-	75.0	16.7	22.3	9.3	156.3	14.3
	2500 µg[d]	-	74.3	18.0	25.7	10.0	141.7	17.3
	5000 µg[d]	-	64.7	24.3	22.3	8.0	144.7	18.7
	1250 µg[c]	+	75.3	16.7	26.3	13.0	268.3	28.3
	2500 µg[d]	+	76.0	18.3	31.0	12.0	277.0	15.0
	5000 µg[d]	+	65.3	19.7	22.7	11.3	165.3	10.7

[a]Means of triplicate counts from solvent controls, positive controls, and test material doses
[b]CGA 245704 was spiked with 0.5% CGA 362020.
[c]Results for the two lowest assayed doses (312.5 and 625 µg/plate +/-S9) did not suggest a mutagenic effect.
[d]Compound precipitation was reported at 2500 and 5000 µg/plate +/-S9.
Abbreviations:

DMSO = Dimethyl sulfoxide
NaN3 = Sodium azide
2NF = 2-Nitrofluorene
9AA = 9-Aminoacridine
MMC = Mitomycin-C
4NQO= 4-Nitroquinoline
2AA = 2-Aminoanthracene
CP = Cyclophosphamide

Note: Data were extracted from the study report, including p. 18 and Tables 1 and 2; (pp.24 and 25).

Pages 10 – 12 not mailed to registrant

TABLE 1. Representative Results of the Microbial/Mammalian Microsome Mutation Assay with CGA 245704 (99.3%) + CGA 362020 (0.5%) -- Trial 2

			Revertants per Plate of Microbial Tester Strains[a]					
				S. typhimurium				E. coli
Substance	Dose per Plate	S9 Activation	TA100	TA1535	TA98	TA1537	TA102	WP2 uvrA
Solvent Control[a]								
DMSO	100 µL	-	94.7	17.0	17.3	12.7	272.0	19.7
	100 µL	+	79.0	16.0	31.7	9.0	284.7	28.3
Positive Controls[a]								
NaN3	2 µg	-	1056.3	624.7	--	--	--	--
2NF	5 µg	-	--	--	276.7	--	--	--
9AA	80 µg	-	--	--	--	1371.3	--	--
MMC	0.5 µg	-	--	--	--	--	1625.3	--
4NQO	2 µg	-	--	--	--	--	--	586.7
2AA	1.5 µg	+	1226.3	--	1428.3	312.0	--	--
	4 µg	+	--	--	--	--	1948.7	
	20 µg	+	--	--	--	--	--	829.0
CP	200 µg	+	--	513.7	--	--	--	--
Test Material[a]								
CGA 245704[b]	1250 µg[c]	-	76.7	19.3	18.3	10.0	142.3	13.0
	2500 µg[d]	-	66.7	22.7	19.3	8.0	135.7	12.3
	5000 µg[d]	-	64.0	19.7	15.0	9.3	128.7	11.0
	1250 µg[c]	+	93.7	19.0	27.7	8.3	261.0	20.7
	2500 µg[d]	+	91.3	21.0	31.0	9.7	218.3	11.0
	5000 µg[d]	+	74.3	19.7	26.0	8.7	136.3	8.3

[a]Means of triplicate counts from solvent controls, positive controls, and test material doses
[b]CGA 245704 was spiked with 0.5% CGA 362020.
[c]Results for the two lowest assayed doses (312.5 and 625 µg/plate +/-S9) did not suggest a mutagenic effect.
[d]Compound precipitation was reported at 2500 and 5000 µg/plate +/-S9.
Abbreviations:

DMSO = Dimethyl sulfoxide
NaN3 = Sodium azide
2NF = 2-Nitrofluorene
9AA = 9-Aminoacridine
MMC = Mitomycin-C
4NQO= 4-Nitroquinoline
2AA = 2-Aminoanthracene
CP = Cyclophosphamide

Note: Data were extracted from the study report, including p. 18 and Tables 3 and 4; (p.26 and 27).

ACUTE TOX ONE-LINERS

1. **DP BARCODE:** D290017
2. **PC CODE:** 061402 CGA-245704 Technical
3. **CURRENT DATE:** August 29, 2003
4. **TEST MATERIAL:** CGA-245704 (99.3%) + CGA-362020 (0.5%)

Study/Species/Lab Study #/Date	MRID	Results	Tox. Cat.	Core Grade
Salmonella & E. coli/mammalian microsome mutagenicity test (Ames Assay)/Genetic Toxicology Novartis, Basel, Switzerland/Basel No.983053/MAY-14-1998	45434101	Concentrations tested: 312.5, 625, 1250, 2500 & 5000 µg/plate (precipitation at 2500 and 5000 µg/plate) +/- S9 with Salmonella typhimurium strains TA 98, TA 100, TA 102, TA 1535, TA 1537 and E. coli WP2 uvrA. Plate incorporation procedure +/-S9 in the original and -S9 in confirmatory; preincubation procedure +S9 in confirmatory. No indication of any increase in number of revertants with any of the strains at any concentration. The test material is negative in this assay.	n/a	A

Core Grade Key: **A =Acceptable, S = Supplementary, U = Unacceptable, V = Self Validated**

Fast track

#15120

DP BARCODE: D290017

CASE: 063610 DATA PACKAGE RECORD DATE: 05/14/03
SUBMISSION: S631360 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 345 TECH-FORMULA CHANGE AMND
RANKING : 5 POINTS ()
CHEMICALS: 061402 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methy %

ID#: 000100-00921 CGA-245704 TECHNICAL
COMPANY: 000100 SYNGENTA CROP PROTECTION, INC.
PRODUCT MANAGER: 22 CYNTHIA GILES-PARKER 703-305-7740 ROOM: CM2 219
PM TEAM REVIEWER: MARIA RODRIGUEZ 703-305-6710 ROOM: CM2 269
RECEIVED DATE: 03/03/03 DUE OUT DATE: 06/01/03

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 290017 EXPEDITE: N DATE SENT: 05/14/03 DATE RET.: / /
CHEMICAL: 061402 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methyl ester(9
DP TYPE: 001 Submission Related Data Package
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT
DIV : RD	/ /	/ /
BRAN: TRB	/ /	/ /
SECT: TOX	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

ADMIN DUE DATE: 06/28/03
NEGOT DATE: / /
PROJ DATE: / /

* * * DATA REVIEW INSTRUCTIONS * * *

ATTENTION John Redden
This request was also sent for product chemistry review under D290015. Chem will need to know if you accept the argument presented in the letter and data cited that the impurity is not of TOX concern.

If you want the study I will provide

Thanks in advance! Dennis

Dennis

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
290015	TRB/CHEM	05/13/03	06/27/03	Y	Y	Y

Data need to go to HED?

DP BARCODE: D290015

CASE: 063610 DATA PACKAGE RECORD DATE: 05/13/03
SUBMISSION: S631360 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 345 TECH-FORMULA CHANGE AMND
RANKING : 5 POINTS ()
CHEMICALS: 061402 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methy %

ID#: 000100-00921 CGA-245704 TECHNICAL
COMPANY: 000100 SYNGENTA CROP PROTECTION, INC.
PRODUCT MANAGER: 22 CYNTHIA GILES-PARKER 703-305-7740 ROOM: CM2 219
PM TEAM REVIEWER: MARIA RODRIGUEZ 703-305-6710 ROOM: CM2 269
RECEIVED DATE: 03/03/03 DUE OUT DATE: 06/01/03

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 290015 EXPEDITE: N DATE SENT: 05/13/03 DATE RET.: / /
CHEMICAL: 061402 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methyl ester(9
DP TYPE: 001 Submission Related Data Package
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT
DIV : RD	/ /	/ /
BRAN: TRB	/ /	/ /
SECT: CHEM	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

ADMIN DUE DATE: 06/27/03
NEGOT DATE: / /
PROJ DATE: / /

* * * DATA REVIEW INSTRUCTIONS * * *

Please review the revised CSF submitted. They have also asked to remove an impurity. What do you think?

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS

They cite a mutagenicity study.

Syngenta Crop Protection, Inc. Tel 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

syngenta

FEDERAL EXPRESS

February 27, 2003

Mr. Dennis McNeilly
Fungicide Team 22
Document Processing Desk (AMEND)
Office of Pesticide Programs (H-7504C)
U.S. Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall 2 – Room 266A
Arlington, VA 22202

Attention: Dennis McNeilly – Team 22

Subject: Acibenzolar-S-Methyl (EPA Reg. No. 100-921)
Request to Amend Confidential Statement of Formula (CSF)
Removal of CGA-362020, an Impurity, from CSF

Dear Mr. McNeilly:

Syngenta is requesting to amend the current CSF of Acibenzolar-s-methyl dated March 30, 1998 by removing the impurity CGA-362020 from column 10. We have conducted a mutagenicity study to show this impurity is of no toxicological concern. See:

> MRID 45434101 "Salmonella and Escherichia/Mammalian-Microsome Mutagenicity Test." See page 13 under Conclusion "it is concluded that CGA-245704 spiked with CGA-362020 .... did not induce gene mutations in the strains ..... used."

The mutagenicity studies performed on the "new" production process were requested in an EPA Memorandum dated January 20, 1999 "Acibenzolar-s-methyl: Report of the FQPA Safety Factor Committee" See pages 19 and 32.

> MRID 45434102, "Product Identity, Composition, and Analysis of CGA-245704 Technical (Addendum to MRID 44537003)", show that CGA-362020 is present at less than 0.1% in technical produced under the "new" thiazole process. Because the impurity is less than 0.1% and is of no toxicological concern, we are requesting to remove it from the CSF based on 40CFR 158.155.

Box 5 on the CSF is modified to reflect the current EPA product manager.

syngenta

Enclosed in support of this submission are:

- Completed EPA Application for Pesticide Registration Form 8570-1
- Two (2) Copies of Confidential Statement of Formula (CSF) dated February 20, 2003

Please contact me at 336.632.2146 or my Regulatory Assistant, Trina Brodie at 336.632.2062, if you have any questions or comments.

Respectfully submitted,

Larry Zang

Larry Zang
Senior Regulatory Product Manager

Enclosure

cc: Maria Rodriguez – Team 22

A

B

Please read instructions on reverse before completing form.

United States Environmental Protection Agency Washington, DC 20460	[ ] Registration [X] Amendment [ ] Other	OPP Identifier Number ~~281737~~ 298980

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
100-921	Dennis McNeilly	[x] None [ ] Restricted
4. Company/Product (Name)	PM#	
Acibenzolar-S-Methyl	22	
5. Name and Address of Applicant *(Include ZIP Code)* Syngenta Crop Protection, Inc. P. O. Box 18300 Greensboro, NC 27419 [ ] *Check if this is a new address*	6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

[x] Amendment - Explain below.

[ ] Resubmission in response to Agency letter dated _____

[ ] Notification - Explain below.

[ ] Final printed labels in response to Agency letter dated _____

[ ] "Me Too" Application.

[X] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For Section I and Section II.).

Syngenta is requesting to amend the current CSF of Acibenzolar-S-methyl dated March 30, 1998 by removing the impurity CGA-362020 from column 10. We have conducted a mutagenicity study to show this impurity is of no toxicological concern. Also, Box 5 on the CSF is modified to reflect the current EPA product manager.

Section – III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging		Water Soluble Packaging		2. Type of Container
[ ] Yes* [ ] No	[ ] Yes [ ] No		[ ] Yes [ ] No		[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
**Certification must be submitted*	If "Yes" Unit Packaging wgt.	No. per Container	If "Yes" Unit Packaging wgt.	No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[ ] Label [ ] Container		[ ] On Label [ ] On Labeling accompanying product

6. Manner in Which Label is Affixed to Product [ ] Lithograph [ ] Paper glued [ ] Stenciled [ ] Other _____

Section – IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Larry Zang	Senior Regulatory Product Manager	336.632.2146

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature	3. Title	6. Date Application Received (Stamped)
Larry Zang /bb	Senior Regulatory Product Manager	
4. Typed Name	5. Date	
Larry Zang	February 27, 2003	

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

DATE:28/June/2003

SUBJECT: TGAI PRODUCT CHEMISTRY REVIEW / ACTION:345
DP BARCODE No.290015 EPA REG.No.100-921
CHEMICAL: CGA-245704 Technical Acibenzolar-S-Methyl
PCC for the AI: 061402
COMPANY: Syngenta Crop Protection Inc.

TO: PM 22: Cynthia Giles-Parker/ Maria Rodriguez, PM Team Reviewer
Branch:Fungicide
Registration Division (7505C)

FROM: Harold Podall, Ph.D., Chemist H Podall 6/25/03
Technical Review Branch / RD(7505C) STm 6/26/03

INTRODUCTION\DESCRIPTION OF SUBMISSION:

The registrant requests amendment of the current CSF of Acibenzolar-S-Methyl Technical, dated 3/20/98, by removing the impurity CGA 362020 from column 10 of the CSF in the revised CSF dated 2/20/03 in accord with 40 CFR 158.155, i.e., on the basis that its concentration is less than 0.!% and it is not of toxicological concern, and updating Box 5 of the CSF with the name of the current product manager, PM 22: Cynthia Giles-Parker.

SUMMARY OF FINDINGS:

1. Based on a five batch analyses of this technical product, 99 % purity, containing 1.0% of process related impurities, the impurity in question, CGA 362020, was not found to be present at a concentration as low as 0.1% by weight of the technical (MRID 454341-02).

2. Mutagenicity studies have shown that the the technical product CGA-245704 spiked with the impurity in question CGA-362020 is of no toxicological concern (reference p.13, MRID 454341-01).

3. The revised CSF dated 2/20/03 based on the "new" thiazole manufacturing process, which does not contain the impurity in question, is acceptable as per 40 CFR 158.155 (c) & (d).

CONCLUSIONS/RECOMMENDATIONS:

1. Because the concentration of the impurity in question is less than 0.1% by weight of the technical product and is of no toxicological concern it is not required to list the impurity in the updated CSF of 2/20/03.

2. The updated CSF based on the "new" thiazole manufacturing process for the technical product in which the impurity in question, CGA-362020, is not present at a concentration equal to or greater than 0.1% by weight of the technical and is of no toxicological concern, is acceptable, as per 40 CFR 158.155(c)&(d).

#15116

DP BARCODE: D290015

CASE: 063610 DATA PACKAGE RECORD DATE: 05/13/03
SUBMISSION: S631360 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 345 TECH-FORMULA CHANGE AMND
RANKING : 5 POINTS ()
CHEMICALS: 061402 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methy %

ID#: 000100-00921 CGA-245704 TECHNICAL
COMPANY: 000100 SYNGENTA CROP PROTECTION, INC.
PRODUCT MANAGER: 22 CYNTHIA GILES-PARKER 703-305-7740 ROOM: CM2 219
PM TEAM REVIEWER: MARIA RODRIGUEZ 703-305-6710 ROOM: CM2 269
RECEIVED DATE: 03/03/03 DUE OUT DATE: 06/01/03

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 290015 EXPEDITE: N DATE SENT: 05/13/03 DATE RET.: / /
CHEMICAL: 061402 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methyl ester(9
DP TYPE: 001 Submission Related Data Package
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT
DIV : RD	/ /	/ /
BRAN: TRB	/ /	/ /
SECT: CHEM	/ /	/ /
REVR : H. Rodd	6/18/03	6/26/03
CONTR:	/ /	/ /

6-28-03
ADMIN DUE DATE: ~~06/27/03~~
NEGOT DATE: / /
PROJ DATE: / /

* * * DATA REVIEW INSTRUCTIONS * * *

Please review the revised CSF submitted. They have also asked to remove an impurity. What do you think?

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS

They cite a mutagenicity study. — will send to TRB/TOX under another beam

Maria
345
S 631360

FRONT END PROCESSING APPLICATION INFORMATION CHECK LIST

PM 22

EPA COMPANT NUMBER 100-921

EPA REGISTRATION NUMBER STATUS (FOR AMENDMENTS) ACTIVE ✓ CANCELLED_____

NOT IN REFS_____

"ME-TOO" CITED PRODUCT STATUS ACTIVE_____ CANCELLED_____

NOT IN REFS_____

OPP# 298980 DATE 3-7-3

Syngenta Crop Protection, Inc. Tel 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

syngenta

FEDERAL EXPRESS

February 27, 2003

Mr. Dennis McNeilly
Fungicide Team 22
Document Processing Desk (AMEND)
Office of Pesticide Programs (H-7504C)
U.S. Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall 2 – Room 266A
Arlington, VA 22202

Attention: Dennis McNeilly – Team 22

Subject: Acibenzolar-S-Methyl (EPA Reg. No. 100-921)
Request to Amend Confidential Statement of Formula (CSF)
Removal of CGA-362020, an Impurity, from CSF

Dear Mr. McNeilly:

Syngenta is requesting to amend the current CSF of Acibenzolar-s-methyl dated March 30, 1998 by removing the impurity CGA-362020 from column 10. We have conducted a mutagenicity study to show this impurity is of no toxicological concern. See:

> MRID 45434101 "Salmonella and Escherichia/Mammalian-Microsome Mutagenicity Test." See page 13 under Conclusion "it is concluded that CGA-245704 spiked with CGA-362020 .... did not induce gene mutations in the strains ..... used."

The mutagenicity studies performed on the "new" production process were requested in an EPA Memorandum dated January 20, 1999 "Acibenzolar-s-methyl: Report of the FQPA Safety Factor Committee" See pages 19 and 32.

> MRID 45434102, "Product Identity, Composition, and Analysis of CGA-245704 Technical (Addendum to MRID 44537003)", show that CGA-362020 is present at less than 0.1% in technical produced under the "new" thiazole process. Because the impurity is less than 0.1% and is of no toxicological concern, we are requesting to remove it from the CSF based on 40CFR 158.155.

Box 5 on the CSF is modified to reflect the current EPA product manager.

Enclosed in support of this submission are:

- Completed EPA Application for Pesticide Registration Form 8570-1
- Two (2) Copies of Confidential Statement of Formula (CSF) dated February 20, 2003

Please contact me at 336.632.2146 or my Regulatory Assistant, Trina Brodie at 336.632.2062, if you have any questions or comments.

Respectfully submitted,

Larry Zang
Senior Regulatory Product Manager

Enclosure

cc: Maria Rodriguez – Team 22

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

03/06/2003

LARRY ZANG
SYNGENTA CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO NC 274198300

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

PRODUCT NAME: ACIBENZOLAR-S-METHYL
COMPANY NAME: SYNGENTA CROP PROTECTION, INC.
OPP IDENTIFICATION NUMBER: 298980
EPA REGISTRATION NUMBER: 100-921
EPA RECEIPT DATE: 03/03/2003

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application qualifies for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability.

If you have any questions, please contact C. Giles-Parker, Product Manager 22, at (703)-305-7740.

Sincerely,

J. Price

Front End Processing Staff
Information Services Branch
Program Management and Support Division

A . . B

Please read instructions on reverse before completing form.

United States Environmental Protection Agency
Washington, DC 20460

EPA

[ ] Registration
[X] Amendment
[ ] Other

OPP Identifier Number
~~281737~~
298980

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
100-921	Dennis McNeilly	[x] None [ ] Restricted
4. Company/Product (Name)	PM#	
Acibenzolar-S-Methyl	22	

5. Name and Address of Applicant *(Include ZIP Code)*
Syngenta Crop Protection, Inc.
P. O. Box 18300
Greensboro, NC 27419

[ ] *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

[x] Amendment - Explain below.
[ ] Resubmission in response to Agency letter dated _____
[ ] Notification - Explain below.
[ ] Final printed labels in response to Agency letter dated _____
[ ] "Me Too" Application.
[X] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For Section I and Section II.).

Syngenta is requesting to amend the current CSF of Acibenzolar-S-methyl dated March 30, 1998 by removing the impurity CGA-362020 from column 10. We have conducted a mutagenicity study to show this impurity is of no toxicological concern. Also, Box 5 on the CSF is modified to reflect the current EPA product manager.

Section – III

1. **Material This Product Will Be Packaged In:**

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes* [ ] No	[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
**Certification must be submitted*	If "Yes" Unit Packaging wgt. / No. per Container	If "Yes" Unit Packaging wgt. / No. per container	

3. Location of Net Contents Information
[ ] Label [ ] Container

4. Size(s) Retail Container

5. Location of Label Directions
[ ] On Label
[ ] On Labeling accompanying product

6. Manner in Which Label is Affixed to Product
[ ] Lithograph
[ ] Paper glued
[ ] Stenciled
[ ] Other _____

Section – IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Larry Zang	Senior Regulatory Product Manager	336.632.2146

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature	3. Title	6. Date Application Received (Stamped)
Larry Zang /BB	Senior Regulatory Product Manager	
4. Typed Name	5. Date	
Larry Zang	February 27, 2003	

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☐ Other

OPP Identifier Number
298980

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification ☐ None ☐ Restricted
4. Company/Product (Name)	PM#	

5. Name and Address of Applicant *(Include ZIP Code)*

☐ *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☐ "Me Too" Application.
☐ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify) _____
*Certification must be submitted	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☐ Label ☐ Container		☐ On Label ☐ On Labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
4. Typed Name	5. Date

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.
Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.
Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. Company/Product Number - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. EPA Product Manager - If known, fill in the name and PM number of the EPA Product Manager.
3. Proposed Classification - Specify the proposed classification of this product.
4. Product Name - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. Name and Address of Applicant - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. Expedited Review - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. Subject of submission - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. Type of Packaging - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. Type of Retail Container - Indicate type of container in which product will be marketed.
3. Location of Net Contents - Indicate the location of the net contents information for your product.
4. Size(s) of Retail Container - Specify the net contents of all retail containers for your product.
5. Location of Use Directions - Indicate the location of the use directions for your product.
6. Manner in which label is affixed to product - Indicated the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

1-5. Self-explanatory.
6. EPA Use Only.

Larry Zang
Regulatory Manager,
Fungicides

Syngenta, Inc
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

Phone: 336-632-2146
Fax: 336-292-6374
Email:
larry.zang@syngenta.com

syngenta

Fax

To	Cynthia Giles-Parker, Team 22 Fungicide Branch, EPA	Date:	7/21/03
Fax No	(703) 308-1825	Number of pages:	7
Concerning	**Missing page from data submission dated 12/6/02 related to Acibenzolar-s-Methyl Technical (100-921) and Actigard WG (100-922).**		

Cynthia, Attached is page 1767 that was identified as missing in a developmental neurotoxcity study (Guideline 870.6300) we submitted in early December 2002 for Acibenzolar- s-methyl. Syngenta never received via US Mail or by fax a copy of the letter rejecting the study. We became aware of the situation when we failed to find the MRID number for the study in a routine review of our records. We immediately called Theresa Downs in the front end screen who faxed us a copy of the Dec 9, 2002 rejection letter we didn't receive. Can you please place this page in the volume and forward the study back to the front-end screen.? We apologize for any inconvenience this may have caused.

I will contact you later this week to discuss.

Please contact me if you have any questions. Thanks, Larry

page added to reports and data returned to front end screen 7/21/03 RWerdin

APPENDIX 10 - CLINICAL OBSERVATIONS AND FUNCTIONAL OBSERVATION BATTERY - F1 ANIMALS - GROUP 4

4000 PPM ANIMAL NO: 11220
FEMALE

DAY NUMBERS

CONDITION	5	9	13	17	21	25	29	33	37	41	45	49	53	57	61	
TREMORS	N		N		N				N		N				N	
KILLED TERMINATION																X
DIARRHOEA	N		N		N				N		N				N	
SIGNS OF DIARRHOEA	N		N		N				N		N				N	
ABNORMAL GAIT (SEE TEXT)	N		N		N				N		N				N	
ATAXIA	N		N		N				N		N				N	
REDUCED FORELIMB FUNCTION	N		N		N				N		N				N	
REDUCED HINDLIMB FUNCTION	N		N		N				N		N				N	
ROLLING OVER SIDEWAYS	N		N		N				N		N				N	
SPLAYED GAIT	N		N		N				N		N				N	
REDUCED STABILITY	N		N		N				N		N				N	
TIP TOE GAIT	N		N		N				N		N				N	
CHROMODACRYORRHEA	N		N		N				N		N				N	
EXOPHTHALMOS	N		N		N				N		N				N	
EXOPHTHALMOS	N		N		N				N		N				N	
LACHRYMATION	N		N		N				N		N				N	
PTOSIS	N		N		N				N		N				N	
ABDOMINAL TONE DECREASED	N		N		N				N		N				N	

DEC 9 2002

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs

SYNGENTA CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 274198300

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 12/06/02. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

We are unable to accept your data submittal for further processing and review, because of the significant deficiencies noted below. It is being returned to you for correction. If deficiencies were found which apply to your overall submission, they are described immediately following this paragraph. If problems are found with individual studies, they are described below linked to the study identifier found on the enclosed copy of your bibliography.

Rejected study [02] :

* Judging from the pagination of the study, pages. 1767 . . were omitted from the submitted copy.

Syngenta Crop Protection, Inc. Tel 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

syngenta

FEDERAL EXPRESS

December 3, 2002

Document Processing Desk
Registration Division
Office of Pesticide Programs (H7504C)
U. S. Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall 2, Room 266A
Arlington, VA 22202

Attn: Ms. Cynthia Giles-Parker

RE: Acibenzolar-S-Methyl (EPA Reg. No. 100-921)
Actigard 50WG (EPA Reg. No. 100-922)
Conditions of Registration Letter Dated August 11, 2000, Item 4
Developmental Neurotoxicity Study in Rats (870.6300)
Conditions of Registration Satisfied for 100-921 and 100-922.

Dear Ms. Giles-Parker:

Syngenta Crop Protection, Inc., is making a data submission related to the Acibenzolar-S-methyl Technical registration and the end use product Actigard 50WG issued on August 11, 2000. We requested an extension from the original due date in a letter to EPA dated July 15, 2002.

This submission satisfies all the conditions of registration associated with the subject products.

A summary of all submissions related to the subject conditions of registration letter is included as Attachment 1.

Enclosed in support of this submission are:

- Transmittal Document
- Data Volumes

If you have any questions, please contact me at (336) 632-2146 or my Regulatory Assistant, Trina Brodie at (336) 632-2062.

Sincerely,

Larry Zang
Senior Regulatory Product Manager

Enclosures

cc: Maria Rodriguez, Team 22

Attachment 1

100–921 Acibenzolar–S–Methyl Technical
100–922 Actigard 50WG

Conditions of Registration Letter
August 11, 2000

Item	Study	Guideline No.	Submission Date	MRID
4	Developmental Neurotoxicity Study in Rats	870.6300	12/3/02	Not Assigned
4	Subchronic Neurotoxicity Study in Rats	870.6200	7/11/02	45713601
4	Mutagenicity Study (Ames Assay) With Technical Grade Acibenzolar–S–Methyl (Prepaid by a New "Thiazole" Production Process)	870.5100	6/20/01	45434101

The following studies must be upgraded:

Item	Study	Guideline No.	Submission Date	MRID
5	Soil Photolysis Study	161–3	6/20/01	45434103 45434104
5	Aerobic Soil Metabolism Study	162–1	6/20/01	45434103 45434104
5	Aerobic Aquatic Metabolism Study	162–4	6/20/01	45434103 45434104
5	One of Two Batch Equilibrium Study	163–1	6/20/01	45434103 45434104

VOLUME 1 OF 11 OF SUBMISSION
(TRANSMITTAL DOCUMENT)

1. NAME AND ADDRESS OF SUBMITTER

SYNGENTA CROP PROTECTION, INC.
P.O. BOX 18300
GREENSBORO, NC 27419

2. REGULATORY ACTION IN SUPPORT OF WHICH THIS PACKAGE IS SUBMITTED

ACIBENZOLOR-S-METHYL (EPA REG. NO. 100-921)
ACTIGARD 50 WG (EPA REG. NO. 100-922)
CONDITIONS OF REGISTRATION LETTER DATED AUGUST 11, 2004, ITEM 4
DEVELOPMENTAL NEUROTOXICITY STUDY IN RATS (870.6300)
CONDITIONS OF REGISTRATION SATISFIED FOR 100-921 AND 100-922

3. TRANSMITTAL DATE

12/03/2002

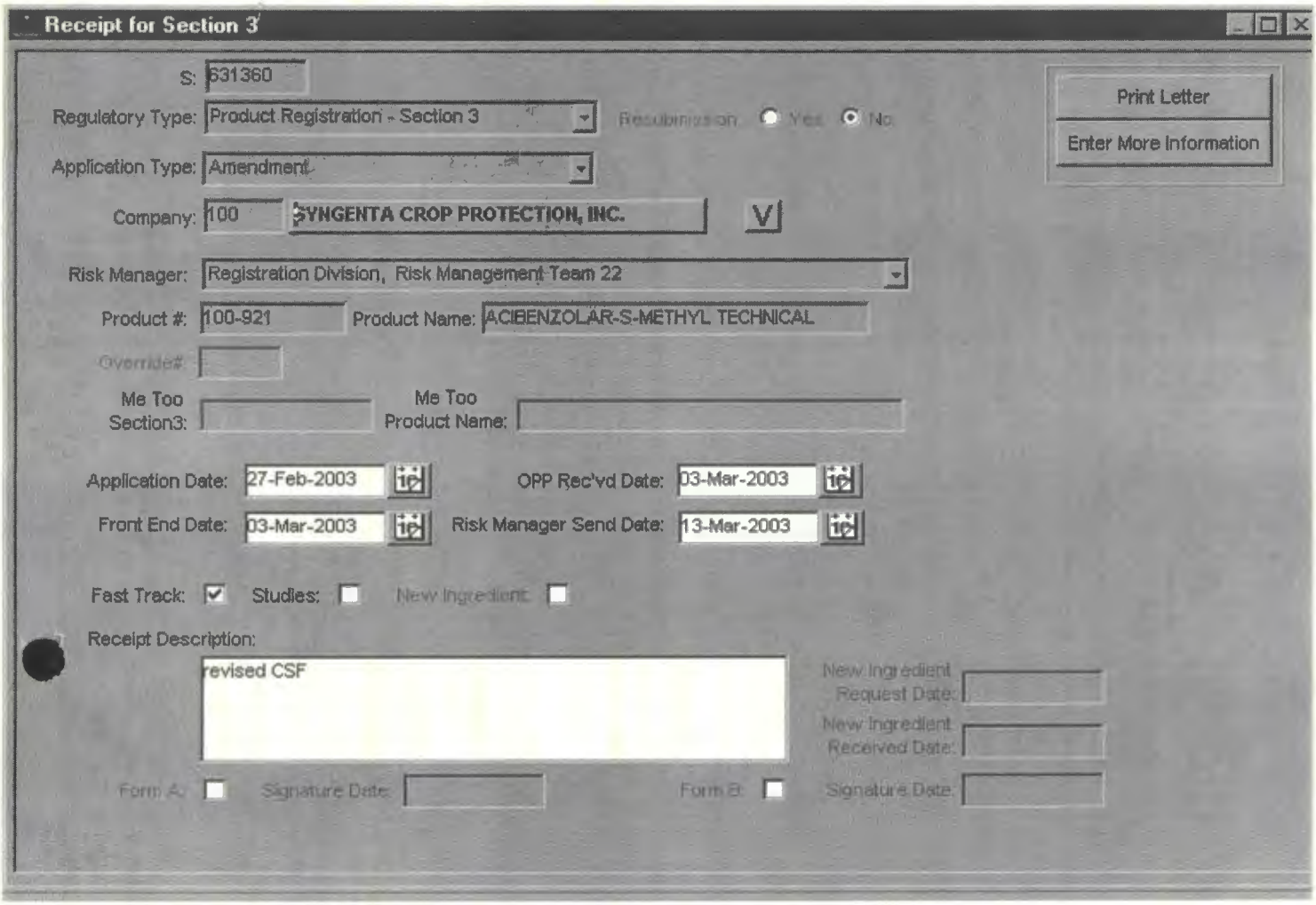
4. LIST OF SUBMITTED STUDIES

MRID NUMBER	VOLUME NUMBER	STUDY TITLE	EPA GUIDELINE NUMBER
	1 OF 11	TRANSMITTAL DOCUMENT	NOT APPLICABLE
reject(02)	2 –11 OF 11	CGA-245704 (ACIBENZOLAR-S-METHYL): DEVELOPMENTAL NEUROTOXICITY STUDY IN RATS; STUDY NUMBER RR0930, (1383) (2752-01, 415156)	870.6300

COMPANY OFFICIAL: LARRY ZANG **(NAME)** **(SIGNATURE)**

COMPANY NAME: SYNGENTA CROP PROTECTION , INC.

COMPANY CONTACT: LARRY ZANG **(NAME)** (336) 632-2146 **(PHONE)**


Receipt for Section 3
S: 631360
Regulatory Type: Product Registration - Section 3
Resubmission: Yes No
Application Type: Amendment
Company: 100 SYNGENTA CROP PROTECTION, INC.
Print Letter
Enter More Information
Risk Manager: Registration Division, Risk Management Team 22
Product #: 100-921
Product Name: ACIBENZOLAR-S-METHYL TECHNICAL
Override#:
Me Too Section3:
Me Too Product Name:
Application Date: 27-Feb-2003
OPP Rec'vd Date: 03-Mar-2003
Front End Date: 03-Mar-2003
Risk Manager Send Date: 13-Mar-2003
Fast Track:
Studies:
New Ingredient:
Receipt Description:
revised CSF
New Ingredient Request Date:
New Ingredient Received Date:
Form A:
Signature Date:
Form B:
Signature Date:

DP BARCODE: D290015

CASE: 063610 DATA PACKAGE RECORD DATE: 05/13/03
SUBMISSION: S631360 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 345 TECH-FORMULA CHANGE AMND
RANKING : 5 POINTS ()
CHEMICALS: 061402 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methy %

ID#: 000100-00921 CGA-245704 TECHNICAL
COMPANY: 000100 SYNGENTA CROP PROTECTION, INC.
PRODUCT MANAGER: 22 CYNTHIA GILES-PARKER 703-305-7740 ROOM: CM2 219
PM TEAM REVIEWER: MARIA RODRIGUEZ 703-305-6710 ROOM: CM2 269
RECEIVED DATE: 03/03/03 DUE OUT DATE: 06/01/03

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 290015 EXPEDITE: N DATE SENT: 05/13/03 DATE RET.: / /
CHEMICAL: 061402 1,2,3-Benzothiadiazole-7-carbothioic acid, S-methyl ester(9
DP TYPE: 001 Submission Related Data Package
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT
DIV : RD	/ /	/ /
BRAN: TRB	/ /	/ /
SECT: CHEM	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

ADMIN DUE DATE: 06/27/03
NEGOT DATE: / /
PROJ DATE: / /

* * * DATA REVIEW INSTRUCTIONS * * *

Please review the revised CSF submitted. They have also asked to remove an impurity. What do you think?

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS

They cite a mutagenicity study.

John I put this into review while you were on vacation
Dennis

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number: **100-921**

Date of Issuance: AUG 11 2000

Term of Issuance: **Conditional**

NOTICE OF PESTICIDE:

XX Registration
____ Reregistration

(under FIFRA, as amended)

Name of Pesticide Product: **Acibenzolar-S-methyl Technical**

Name and Address of Registrant (include ZIP Code):

Mr. Lee Hubbard
Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(C) provided that you:

1. Submit/cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit data.

2. Modify the labeling as follows:

   a. Revise the EPA Registration Number to read, "**EPA Reg No 100-921**".

Continues on Page 2

Signature of Approving Official: /S/

Daniel C. Kenny
Acting Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Date: AUG 11 2000

EPA Form 8570-6

b. The "First Aid" statements must be revised to read as follows: "If in eyes: * Hold eye open and rinse slowly and gently with water for 15-20 minutes. * Remove contact lens, if present, after the first 5 minutes, then continue rinsing eye. * Call a poison control center or doctor for treatment advice." "If on skin: * Take off contaminated clothing. * Rinse skin immediately with plenty of water for 15-20 minutes. * Call a poison control center or doctor for treatment advice."

c. Under the "Directions for Use" section, a list must be added describing the specific use sites for what end-use products the technical may be formulated into.

d. Under the "Environmental Hazards" section of the label, the following statement must be added: "This pesticide is toxic to fish and aquatic invertebrates."

3. Submit one copy of the revised final printed label for the record.

4. The following studies must be submitted as a condition of the registration: Developmental neurotoxicity study in rats; Subchronic neurotoxicity study in rats; and, Mutagenicity study (Ames Assay) with technical-grade acibenzolar-S-methyl (prepared by a new "thiazole" production process). The studies must be submitted within two (2) years of receipt of this Notice.

5. The following studies must be upgraded and submitted as a condition of registration: Soil photolysis study; Aerobic soil metabolism study; Aerobic aquatic metabolism study; and, one of two Batch equilibrium study. The studies must be submitted within one (1) year of receipt of this Notice.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records. If you have any questions, then please contact María I. Rodríguez of my staff at 703-305-6710 or me at 703-305-7546.

Acibenzolar-S-methyl Technical

For Formulation into End-Use Fungicide Products

Active Ingredient:
Acibenzolar-S-methyl: Benzo(1,2,3)thiadiazole-7-carbothioic acid-S-methyl ester (CAS No. 135158-54-2) 98.6%
Other Ingredients: 1.4%
Total 100.0%

MADE IN SWITZERLAND

_____ Pounds (_____ kg)
Net Weight

EPA Reg. No. 100-___
EPA Est. _____
Product ID: _____

ACCEPTED
with COMMENTS
In EPA Letter Dated:
AUG 11 2000
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 100-921

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and **the Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

Conditions of Sale and Warranty

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of Novartis.

No end use of this product other than formulation is intended or implied by the above Conditions of Sale and Warranty.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product is intended for the formulation of fungicide products. This product may be used to formulate products for specific use(s) not listed on the MP label if the formulator, user group, or grower has complied with the U.S. EPA data submission requirements regarding the support of such use(s).

STORAGE AND DISPOSAL

Pesticide Storage and Disposal

Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during clean up procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

KEEP OUT OF REACH OF CHILDREN

CAUTION

Precautionary Statements

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

First Aid

If in eyes: Flush eyes with plenty of water. Get medical attention if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

Environmental Hazards

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Imported by
Novartis Corporation
Greensboro, NC 27419

NCP 921A-L_ 022398

Acibenzolar-S-Methyl
Brassica Leafy Vegetables
Bananas

File: 100-OER
Re: 9F6004
Feb 2000

therefore need to be reflected in the quantitative benefit assessment.

While developing the primary benefit estimates for reduced fatal cancer risks in the proposed radon rule, questions arose regarding the implementation of adjustments for some factors, but not others. For example, would it ever be appropriate to adjust only for latency periods, and not other factors, in the valuation of reduced cancer deaths? The Agency is requesting the SAB's counsel to help answer this and related questions regarding the valuation of cancer risks.

Charge to the Committee

The Agency has requested a review by the SAB–EEAC of its "white paper" on approaches to estimating the benefits of reduced fatal cancer risks. The principal questions for the Science Advisory Board are:

(a) Does the white paper accurately describe the empirical economic literature relevant to the benefit transfer issues that ensue when using the VSL literature to estimate the VSCF in a benefit-cost analysis?

(b) Does the white paper present the important risk and demographic factors that can affect benefit transfer approaches that use VSL estimates for VSCF?

(c) Does the white paper accurately describe attempts in the economic literature to measure VSCF directly?

(d) There are two numeric case studies of environmental cancer risks developed for the white paper. Each presents risk assessment information that forms the basis for quantifying the number of statistical cancer fatalities that will be reduced as a consequence of a hypothetical proposed environmental policy. The case studies are used to illustrate the outcome of using direct measures of the VSCF and benefit transfer adjustments to VSL estimates in order to calculate the VSCF.

(1) Which of the valuation approaches applied to the case study designated as ALPHA are valid to use? Does this case study omit any credible alternative protocols for valuing reductions in fatal cancer risks for benefit-cost analyses of environmental programs?

(2) Which of the valuation approaches applied to the case study designated as OMEGA are valid to use? Does this case study omit any credible alternative protocols for valuing reductions in fatal cancer risks for benefit-cost analyses of environmental programs?

(e) Which economic methods illustrated with the case studies, or additional methods identified by the Committee under charge question d), serve as credible protocols for the Agency to use in representing quantitative data, qualitative information, and sensitivity analyses for the economic value of reduced fatal cancer risks reported in benefit-cost analyses?

FOR FURTHER INFORMATION: Members of the public desiring additional information about the meeting should contact Mr. Thomas Miller, Designated Federal Officer, Environmental Economics Advisory Committee (EEAC), USEPA Science Advisory Board (1400A), Room 6450, 1200 Pennsylvania Avenue, NW, Washington, DC 20460; telephone/voice mail at (202) 564–4558; fax at (202) 501–0582; or via e-mail at <miller.tom@epa.gov>. For a copy of the draft meeting agenda, please contact Ms. Dorothy Clark, Management Assistant at (202) 564–4537 or by FAX at (202) 501–0582 or via e-mail at <clark.dorothy@epa.gov>. Single copies of the background document, *Valuing Fatal Cancer Risk Reductions* can be obtained by contacting Mr. Brett Snyder, U.S. Environmental Protection Agency, Office of Policy and Reinvention (Mail Drop 2172), 1200 Pennsylvania Ave., NW, Washington, DC, 20460, (202) 260–5610, FAX (202) 260–2685, or via email at: <snyder.brett@epa.gov>.

Providing Oral or Written Comments

Members of the public who wish to make a brief oral presentation to the Committee must contact Mr. Thomas Miller, Designated Federal Officer for the Environmental Economics Advisory Committee, *in writing* (by letter or fax) no later than 4:00 pm Eastern Time, Thursday, February 17, 2000, at the address noted above in order to be included on the agenda. The request should identify the name of the individual who will make the presentation, the organization (if any) they will represent, any audio-visual equipment (*e.g.*, overhead projector, 35 mm projector, chalkboard, etc.), and at least 35 copies of an outline of the issues to be addressed or the presentation itself. To discuss technical aspects of the meeting, please contact Mr. Miller by telephone at (202) 564–4558. For a copy of the draft agenda please contact Ms. Dorothy Clark, Management Assistant, at (202) 564–4537, or by FAX at (202) 501–0582 or via e-mail at <clark.dorothy@epa.gov>.

Providing Oral or Written Comments at SAB Meetings

The Science Advisory Board expects that public statements presented at its meetings will not be repetitive of previously submitted oral or written statements. In general, each individual or group making an oral presentation will be limited to a total time of ten minutes. Written comments (at least 35 copies) received in the SAB Staff Office sufficiently prior to a meeting date (usually one week before the meeting), may be mailed to the relevant SAB committee or subcommittee; comments received too close to the meeting date will normally be provided to the committee at its meeting, or mailed soon after receipt by the Agency. Written comments may be provided to the relevant committee or subcommittee up until the time of the meeting.

Additional information concerning the Science Advisory Board, its structure, function, and composition, may be found on the SAB Website (*http://www.epa.gov/sab*) and in the Annual Report of the Staff Director which is available from the SAB Publications Staff at (202) 564–4533 or via fax at (202) 501–0256.

Meeting Access

Individuals requiring special accommodation at this meeting, including wheelchair access, should contact the appropriate DFO at least five business days prior to the meeting so that appropriate arrangements can be made.

Dated: January 28, 2000.

Donald G. Barnes,

Staff Director, Science Advisory Board.

[FR Doc. 00–2477 Filed 2–3–00; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[PF–908; FRL–6398–9]

Novartis Crop Protection; Notice of Filing a Pesticide Petition To Establish a Tolerance for Certain Pesticide Chemicals in or on Food

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This notice announces the initial filing of a pesticide petition proposing the establishment of regulations for residues of certain pesticide chemicals in or on various food commodities.

DATES: Comments, identified by docket control number PF–908, must be received on or before March 6, 2000.

ADDRESSES: Comments may be submitted by mail, electronically, or in person. Please follow the detailed instructions for each method as provided in Unit I.C. of the **SUPPLEMENTARY INFORMATION.**

To ensure proper receipt by EPA, it is imperative that you identify docket control number PF–908 in the subject line on the first page of your response.

FOR FURTHER INFORMATION CONTACT: By mail: Cynthia Giles-Parker (PM 22), Registration Division (7505C), Office of Pesticide Programs, Environmental Protection Agency, Ariel Rios Bldg., 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (703) 305–7740; and e-mail address: giles-parker.cynthia@epamail.epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

You may be affected by this action if you are an agricultural producer, food manufacturer or pesticide manufacturer. Potentially affected categories and entities may include, but are not limited to:

Categories	NAICS codes	Examples of potentially affected entities
Industry	111 112 311 32532	Crop production Animal production Food manufacturing Pesticide manufacturing

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in the table could also be affected. The North American Industrial Classification System (NAICS) codes have been provided to assist you and others in determining whether or not this action might apply to certain entities. If you have questions regarding the applicability of this action to a particular entity, consult the person listed under **FOR FURTHER INFORMATION CONTACT**

B. How Can I Get Additional Information, Including Copies of this Document and Other Related Documents?

1. *Electronically.* You may obtain electronic copies of this document, and certain other related documents that might be available electronically, from the EPA Internet Home Page at http://www.epa.gov/. To access this document, on the Home Page select "Laws and Regulations" and then look up the entry for this document under the "**Federal Register**—Environmental Documents." You can also go directly to the **Federal Register** listings at http://www.epa.gov/fedrgstr/.

2. *In person.* The Agency has established an official record for this action under docket control number PF–908. The official record consists of the documents specifically referenced in this action, any public comments received during an applicable comment period, and other information related to this action, including any information claimed as confidential business information (CBI). This official record includes the documents that are physically located in the docket, as well as the documents that are referenced in those documents. The public version of the official record does not include any information claimed as CBI. The public version of the official record, which includes printed, paper versions of any electronic comments submitted during an applicable comment period, is available for inspection in the Public Information and Records Integrity Branch (PIRIB), Rm. 119, Crystal Mall #2 (CM #2), 1921 Jefferson Davis Highway, Arlington, VA, from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The PIRIB telephone number is (703) 305–5805.

C. How and to Whom Do I Submit Comments?

You may submit comments through the mail, in person, or electronically. To ensure proper receipt by EPA, it is imperative that you identify docket control number PF–908 in the subject line on the first page of your response.

1. *By mail.* Submit your comments to: Public Information and Records Integrity Branch (PIRIB), Information Resources and Services Division (7502C), Office of Pesticide Programs (OPP), Environmental Protection Agency, Ariel Rios Bldg., 1200 Pennsylvania Ave., NW., Washington, DC 20460.

2. *In person or by courier.* Deliver your comments to: Public Information and Records Integrity Branch (PIRIB), Information Resources and Services Division (7502C), Office of Pesticide Programs (OPP), Environmental Protection Agency, Rm. 119, CM #2, 1921 Jefferson Davis Highway, Arlington, VA. The PIRIB is open from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The PIRIB telephone number is (703) 305–5805.

3. *Electronically.* You may submit your comments electronically by e-mail to: *"opp-docket@epa.gov,"* or you can submit a computer disk as described above. Do not submit any information electronically that you consider to be CBI. Avoid the use of special characters and any form of encryption. Electronic submissions will be accepted in Wordperfect 6.1/8.0 or ASCII file format. All comments in electronic form must be identified by docket control number PF–908. Electronic comments may also be filed online at many Federal Depository Libraries.

D. How Should I Handle CBI That I Want to Submit to the Agency?

Do not submit any information electronically that you consider to be CBI. You may claim information that you submit to EPA in response to this document as CBI by marking any part or all of that information as CBI. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. In addition to one complete version of the comment that includes any information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public version of the official record. Information not marked confidential will be included in the public version of the official record without prior notice. If you have any questions about CBI or the procedures for claiming CBI, please consult the person identified under **FOR FURTHER INFORMATION CONTACT**

E. What Should I Consider as I Prepare My Comments for EPA?

You may find the following suggestions helpful for preparing your comments:

1. Explain your views as clearly as possible.
2. Describe any assumptions that you used.
3. Provide copies of any technical information and/or data you used that support your views.
4. If you estimate potential burden or costs, explain how you arrived at the estimate that you provide.
5. Provide specific examples to illustrate your concerns.
6. Make sure to submit your comments by the deadline in this notice.
7. To ensure proper receipt by EPA, be sure to identify the docket control number assigned to this action in the subject line on the first page of your response. You may also provide the name, date, and **Federal Register** citation.

II. What Action is the Agency Taking?

EPA has received a pesticide petition as follows proposing the establishment and/or amendment of regulations for residues of certain pesticide chemicals in or on various food commodities under section 408 of the Federal Food,

Drug, and Comestic Act (FFDCA), 21 U.S.C. 346a. EPA has determined that this petition contains data or information regarding the elements set forth in section 408(d)(2); however, EPA has not fully evaluated the sufficiency of the submitted data at this time or whether the data supports granting of the petition. Additional data may be needed before EPA rules on the petition.

List of Subjects

Environmental protection, Agricultural commodities, Feed additives, Food additives, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: January 24, 2000.

James Jones,

Director, Registration Division, Office of Pesticide Programs.

Summary of Petition

9F6004

The petitioner summary of the pesticide petition is printed below as required by section 408(d)(3) of the FFDCA. The summary of the petition was prepared by the petitioner and represents the view of the petitioner. EPA is publishing the petition summary verbatim without editing it in any way. The petition summary announces the availability of a description of the analytical methods available to EPA for the detection and measurement of the pesticide chemical residues or an explanation of why no such method is needed.

EPA has received a pesticide petition (9F6004) from Novartis Crop Protection, P.O. Box 18300, Greensboro, NC 27419 proposing, pursuant to section 408(d) of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 346a(d), to amend 40 CFR part 180 by establishing a tolerance for residues of 1,2,3-benzothiadiazole-7-carbothioic acid S-methyl ester (acibenzolar-S-methyl) in or on the raw agricultural commodity brassica leafy vegetables crop group and bananas at 1.0 and 0.1 parts per million (ppm), respectively. EPA has determined that the petition contains data or information regarding the elements set forth in section 408(d)(2) of the FFDCA; however, EPA has not fully evaluated the sufficiency of the submitted data at this time or whether the data supports granting of the petition. Additional data may be needed before EPA rules on the petition.

A. Residue Chemistry

1. *Plant metabolism.* Novartis believes the metabolism of acibenzolar-S-methyl has been well characterized. Only 4.6% and 14.9% of the total radioactive residue (TRR) was non-extractable in lettuce at the recommended application rate and three times the recommended application rate, respectively. Non-extractables were also low in a tomato metabolism study; 3.4% and 7.4% in tomatoes and foliage, respectively. The metabolism in these crops proceeded via hydrolysis of benzo [1,2,3] thiadiazole-7-carbothioic acid S-methyl ester to benzo [1,2,3] thiadiazole-7-carboxylic acid (BTCA), followed by conjugation as ester, glycoside and/or other plant constituents. The metabolism profile supports the use of an analytical enforcement method that accounts for acibenzolar-S-methyl and metabolites containing the benzo [1,2,3] thiadiazole-7-carboxylic acid (BTCA) moiety.

2. *Analytical method.* Novartis Analytical Method AG-671A is a practical and valid method for the determination and confirmation of CGA-245704 (acibenzolar-S-methyl) in raw agricultural commodities (RAC) and processing substrates from the tobacco, leafy (including brassica) and fruiting vegetable crop groups at a limit of quantitation (LOQ) of 0.02 ppm. The method involves extraction, solid phase cleanup of samples with analysis by high performance liquid chromotography (HPLC) with ultraviolet (UV) detection or confirmatory LC/MS. The validity is demonstrated by the acceptable accuracy and precision obtained on numerous procedural recovery samples (radiovalidation and field trial sample sets), and by the extractability and accountability obtained by the analysis of weathered radioactive substrates using Analytical Method AG-671A. Novartis Analytical Method REM 172.11 is a practical and valid method for the determination and confirmation of CGA-245704 in RAC of bananas at a LOQ of 0.02 ppm. The method involves hydrolytic extraction, partitioning, and solid phase cleanup of samples with analysis by two-column HPLC switching with UV detection. The validity is demonstrated by the acceptable accuracy and precision obtained on numerous procedural recovery samples (banana, tomatoes, cucumbers, and milk).

3. *Magnitude of residues.* This petition is supported by 17 field trials conducted on representative members of the brassica leafy vegetable crop groupings. All samples were analyzed for by the total residue method (AG-671A) to determine the combined residues of acibenzolar-S-methyl and metabolites which contain the benzo [1,2,3] thiadiazole-7-carboxylic acid (BTCA) moiety. In brassica leafy vegetables, the maximum residues found on representative commodities were 0.63 ppm, 0.57 ppm, 0.31 ppm, 0.64 ppm, and 0.80 ppm, for broccoli (flower, head and stem), cabbage head (with wrapper leaves), cabbage head (without wrapper leaves), cabbage wrapper leaves, and mustard greens leaves, respectively. A tolerance of 1.0 ppm for the brassica leafy vegetable crop group has been proposed. This petition is supported by 14 field trials conducted on bananas. Banana samples were analyzed for by the total residue method REM 17.11 to determine the combined residues of acibenzolar-S-methyl and metabolites which contain the benzo [1,2,3] thiadiazole-7-carboxylic acid (BTCA) moiety. The maximum residue found in bananas was 0.08 ppm. A tolerance of 0.1 ppm in bananas has been proposed.

B. Toxicological Profile

1. *Acute toxicity.* The risk from acute dietary exposure to acibenzolar-S-methyl is considered to be very low. CGA-245704 and the formulated 50 WG product have low orders of acute toxicity by the oral, dermal and inhalation exposure routes. Results from acute studies all fall within toxicity rating categories of III or IV. CGA-245704 technical has a low order of acute toxicity, is only slightly irritating to skin and eyes, but may cause sensitization by skin contact. An LD_{50} of greater than 5,000 milligrams/kilograms (mg/kg) was observed for the acute oral toxicity study in rats. The lowest no observed adverse effect level (NOAEL) in a short-term exposure scenario, identified as 50 mg/kg in the rabbit and rat teratology studies, is 10–fold higher than the chronic NOAEL. Based on worst case assumptions, the chronic exposure assessments (see below) did not result in any margin of exposure (MOE) less than 3,330 for even the most impacted population subgroup. Novartis believes the MOE is greater than 100 for any population subgroups; EPA considers MOEs of 100 or more as satisfactory. The following are results from the acute toxicity tests conducted on the technical material:

i. Rat oral LD_{50} > 5,000 mg/kg/bwt male/female (M/F) toxicity Category IV.

ii. Rat dermal LD_{50} > 2,000 mg/kg/bwt (M/F) toxicity Category III.

iii. Acute inhalation LC_{50} > 5,000 mg/L (M/F) toxicity Category IV.

iv. Rabbit eye irritation: Minimally irritating—toxicity Category III.

v. Rabbit dermal irritation: Slightly irritating—toxicity Category IV.

vi. Dermal sensitization: Sensitizer.

2. *Genotoxicty.* CGA-245704 technical was not mutagenic or clastogenic and did not provoke unscheduled DNA

synthesis when tested thoroughly in a battery of standard *in vivo*, and *in vitro* independent assays, using both eukaryotes and prokaryotes, and with or without metabolic activation. These tests are summarized below:

i. Microbial/Microsome Mutagenicity Assay: Non-mutagenic.

ii. Mammalian Cell Chinese Hampster Ovary (CHO) Mutagenicity Assay: Non-mutagenic; Non-clastogenic.

iii. Chinese Hampster (CH) Bone marrow: Non-clastogenic; negative for chromosome aberrations.

iv. Mouse Micronucleus Test: Non-clastogenic; negative for chromosome aberrations.

v. DNA Damage and Repair Rat hepatocyte: Negative.

3. *Reproductive and developmental toxicity.* Acibenzolar-S-methyl is not a teratogenic hazard except at, or close to, the maximum tolerated dose. In the rat multigeneration study, CGA-245704 (acibenzolar-S-methyl) technical had no effect on rat reproductive parameters including gonadal function, estrus cycles, mating behavior, conception, parturition, lactation, weaning, and sex organ histopathology. At 4,000 ppm, parental body weights (bwt) were reduced. This demonstrated by the results of the following studies:

i. Rat oral teratology—Maternal NOAEL of 200 mg/kg based on embryotoxicity and teratogenic effects; fetal NOAEL of 50 mg/kg.

ii. Rabbit oral teratology study—Maternal NOAEL of 50 mg/kg based on maternal toxicity and slightly delayed ossification; fetal NOAEL of 300 mg/kg based on changes in bwt.

iii. Rat 2-generation reproduction study—NOAEL of 25 mg/kg based on weight development in adults at 4,000 ppm and pups during lactation at 2,000 ppm and above. No adverse effects on reproduction or fertility.

4. *Subchronic toxicity.* No signs of neurotoxicity were noted with CGA-245704 in both acute and subchronic studies even at the highest dose levels of 800 mg/kg and 8,000 ppm, respectively. The evaluated parameters included functional observation battery, motor activity measurement and neurohistopathologic assessment. These tests are summarized below:

i. Rat 28-day dermal study—NOAEL of 1,000 mg/kg/day.

ii. Dog 90-day feeding study—NOAEL of 10 mg based on reduced bwt gain at 50 mg/kg/day.

iii. Mouse 90-day feeding—NOAEL of < 30 mg/kg based on reduced bwt development at 1,000 ppm and above.

iv. Rat 90-day feeding study—NOAEL of 25 mg/kg based on inappetence and reduced bwt development at higher dose levels (4,000, and 8,000 ppm).

5. *Chronic toxicity.* Based on the available chronic toxicity data, Novartis Crop Protection, Inc. believes the Reference Dose (RfD) for acibenzolar-S-methyl is 0.05 mg/kg/day. Acibenzolar-S-methyl is not oncogenic in rats or mice and is not likely to be carcinogenic in humans. No carcinogenic activity was detected in mice and rats at the Maximum Tolerated Dose (MTD). There was no evidence of carcinogenicity in an 18-month feeding study in mice and a 24-month feeding study in rats. Dosage levels in both the mouse and the rat studies were adequate for identifying a cancer risk. Novartis believes acibenzolar-S-methyl should be classified as a "Not Likely" carcinogen based on the lack of carcinogenicity in rats and mice.

6. *Animal metabolism.* Metabolism proceeded primarily via hydrolysis to form the corresponding carboxylic acid (BTCA) which was subsequently conjugated with several amino acids including glycine, lysine and ornithine. Elimination was rapid in all cases. Oxidation of the aromatic ring of the acid was a very minor pathway observed in goats. The metabolic fate of CGA-245704 in plants paralleled that observed in animals. The major metabolite in all test systems was the same hydrolysis product BTCA. Thus, the metabolism profile supports the use of an analytical enforcement method that accounts principally for parent and BTCA.

7. *Metabolite toxicology.* In short-term toxicity studies in rats, CGA-210007 was found to be of, at most, equal or less toxicity than the parent compound. As with parent CGA-245704, the subchronic NOAEL for CGA-210007 was 100 mg/kg bwt.

8. *Endocrine disruption.* Acibenzolar-S-methyl does not belong to a class of chemicals known or suspected of having adverse effects on the endocrine system. Developmental toxicity studies in rats and rabbits and a reproduction study in rats gave no indication that acibenzolar-S-methyl might have any effects on endocrine function related to development and reproduction. Acibenzolar-S-methyl is not a teratogenic hazard except at, or close to, the maximum tolerated dose. The chronic studies also showed no evidence of a long-term effect related to the endocrine system.

C. Aggregate Exposure

1. *Dietary exposure*—i. *Food.* For the purposes of assessing the potential dietary exposure under the proposed tolerances, Novartis has estimated aggregate from the previously requested tolerances for the raw agricultural commodities: leafy vegetables (excluding spinach) at 0.25 ppm; spinach at 1.0 ppm; and fruiting vegetables at 1.0 ppm (PP 8F4974); and the requested tolerances for brassica leafy vegetables at 1.0 ppm and bananas at 0.1 ppm (PP 9F6004). Maximum expected chronic exposure to CGA-245704 in the diets of the most sensitive sub-population, children (1–6 years), was calculated to be 0.5% of the RfD. For the U.S. population (48 contiguous States) chronic exposure was 0.3% of the RfD. Acute dietary exposure is also minimal. Exposure to the most sensitive sub-population, children (1–6 years), was 2.17% of the acute RfD (aRfD). Acute exposure to the U.S. population was 1.2% of the aRfD. Dietary exposure analyses for CGA-245704 (and CGA-210007) were conducted using anticipated residues generated from field trials conducted at the maximum use rate and minimum pre-harvest interval (PHI). In addition, actual dietary exposure would be much less than the estimates made herein since significant residue reduction often takes place in commerce and during food preparation and cooking. Projected market share was included on all commodities except bananas. One hundred percent market share was assumed for bananas. These results (minimal exposure) show more than a reasonable certainty of no harm.

ii. *Drinking water.* The potential for exposure to CGA-245704 through drinking water (surface or ground water) is slight due to the minimal level of this chemical anticipated to reach these bodies of water. This expectation is based on the rapid degradation of CGA-245704 and the recommended low use rates that will further restrict the amount of chemical available for leaching or run-off. A Maximum Contaminant Level Goal (MCLG) of 350 parts per billion (ppb) has been calculated for CGA-245704. This calculated safe exposure value is substantially above the levels that are likely to be found in the environment under proposed conditions of use.

2. *Non-dietary exposure.* Novartis believes that the potential for non-occupational exposure to the general public is unlikely except for potential residues in food crops discussed above. The proposed uses for acibenzolar-S-methyl are for agricultural crops and the product is not used residentially in or around the home.

D. Cumulative Effects

Consideration of a common mechanism of toxicity is not appropriate

at this time since there is no information to indicate that toxic effects produced by acibenzolar-S-methyl would be cumulative with those of any other chemicals. Acibenzolar-S-methyl is a plant activator and no other compounds in this class are registered in the United States. Consequently, Novartis is considering only the potential exposure to acibenzolar-S-methyl in its aggregate risk assessment.

E. Safety Determination

1. *U.S. population.* For the U.S. population (48 contiguous States) chronic exposure was 0.3% of the RfD. Acute dietary exposure is also minimal. Acute exposure to the U.S. population was 1.2% of the aRfD. EPA usually has no concern for exposures below 100% of the RfD because the RfD represents the level at or below which daily aggregate dietary exposure over a lifetime will not pose appreciable risks to human health. Novartis concludes that there is a reasonable certainty that no harm will result from aggregate exposure to acibenzolar-S-methyl residues.

2. *Infants and children.* Embryotoxicity and fetotoxicity were apparent at maternally toxic doses of CGA-245704 technical in rats and rabbits. The lowest NOAEL for this effect was established in the 2-generation reproduction study at 25 mg/kg (200 ppm).

Maximum expected chronic exposure to CGA-245704 in the diets of the most sensitive sub-population, children (1–6 years), was calculated to be 0.5% of the RfD. Acute dietary exposure is also minimal. Exposure to the most sensitive sub-population, children (1–6 years), was 2.17% of the aRfD.

Additionally, CGA-245704 is not a reproductive toxin. Some signs of teratogenicity were found at, or close to, maternally toxic doses. No neurotoxic effects or oncogenic activity has been observed with CGA-245704. From these available toxicology data, no special susceptibility of infants or children is anticipated.

Dietary exposure analyses for CGA-245704 (and CGA-210007) were conducted using anticipated residues generated from field trials conducted at the maximum use rate and minimum pre-harvest interval (PHI). In addition, actual dietary exposure would be much less than the estimates made herein since significant residue reduction often takes place in commerce and during food preparation and cooking. Projected market share was included on all commodities except bananas. One hundred percent market share was assumed for bananas. These results (minimal exposure) show more than a reasonable certainty of no harm.

Acute Dietary Exposure for the U.S. Population and the Most Sensitive Population Sub-Groups at the 99.9th Percentile

Population Sub-group	% aRfD (Diet Only)
U.S. Population - 48 contiguous states - all seasons.	1.20%
All infants (<1 year)	1.54%
Nursing infants (<1year)	0.41%
Non-nursing infants (<1 year)	1.80%
Children (1–6 years)	2.17%
Children (7–12)	1.37%

Exposure to residues of CGA-245704 and CGA-210007 in consumed food is minimal. Both chronic and acute exposure estimates demonstrate the use of CGA-245704 on crops results in more than a reasonable certainty of no harm. The results herein are conservative since field trial residues utilized in these assessments were generated under maximum label use rates and minimum pre-harvest intervals.

F. International Tolerances

Codex maximum residue levels (MRLs) have not been established for residues of CGA-245704 in or on raw agricultural commodities from the fruiting vegetable and leafy vegetable crop groups. Maximum residue levels of 0.1 ppm have been established for CGA-245704 on wheat in Switzerland and Hungary. Proposed CODEX MRLs of 1.0 ppm on tomatoes and 0.1 ppm on bananas, cereals, wheat, spring barley, and rice have been proposed (Japan).

[FR Doc. 00–2484 Filed 2–3–00; 8:45 am]
BILLING CODE 6560–50–F

ENVIRONMENTAL PROTECTION AGENCY

[FRL–6533–5]

The QTRACER Program for Tracer-Breakthrough Curve Analysis for Karst and Fractured-Rock Aquifers; and A Lexicon of Cave and Karst Terminology with Special Reference to Environmental Karst Hydrology

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability of two final documents and CD–ROM.

SUMMARY: The U.S. Environmental Protection Agency (EPA) announces the availability of two final documents, The QTRACER Program for Tracer-Breakthrough Curve Analysis for Karst and Fractured-Rock Aquifers (EPA/600/R–98/156a, February 1999) and CD–ROM (EPA/600/R–98/156b, February 1999), and A Lexicon of Cave and Karst Terminology with Special Reference to Environmental Karst Hydrology (EPA/600/R–99/006, January 1999), prepared by the National Center for Environmental Assessment—Washington Office (NCEA–W), within the Office of Research and Development.

The QTRACER program was developed to provide a fast and easy method for evaluating tracer-breakthrough curves generated from tracing studies conducted in karst and fractured-rock aquifers. The results may then be applied in solute-transport modeling and risk assessment studies. The QTRACER document will serve as a technical guide to various groups who must address potential and/or existing ground-water contamination problems in karst and fractured-rock terranes. Tracing studies are always appropriate and probably necessary, but analyses can be difficult and tedious. This document and associated computer programs alleviate some of these problems.

A Lexicon of Cave and Karst Terminology with Special Reference to Environmental Karst Hydrology was prepared to satisfy the need to understand the terminology common to the field of karst. This document is a glossary of most terms that have some relationship to the field of environmental karst, as well as specific karst terms. It includes many foreign terms because much karst research is conducted in foreign countries and published using local terminology. In many instances common environmental terms are defined in such a way as to specifically reference karstic phenomena. This document will serve as a technical guide for those who must read the karst literature or hold discussion with karst researchers. It is intended to remove much of the confusion surrounding many karst terms.

ADDRESSES: These documents are being made available electronically from the NCEA web site at http://www.epa.gov/ncea. A limited number of copies of the printed and CD–ROM version of the QTRACER document is available from EPA's National Service Center for Environmental Publications (NSCEP) in Cincinnati, Ohio (telephone: 1–800–490–9198, or 513–489–8190; facsimile 513–489–8695). Please provide the title and EPA number when ordering from NSCEP. Paper copies of both documents also may be purchased from the National Technical Information Service

Pages 192-206*Confidential Statement of Formula may be entitled to confidential treatment*